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When does gender matter? Explaining the transition to adulthood as a gendered process

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WHEN DOES GENDER MATTER?
EXPLAINING THE TRANSITION TO ADULTHOOD AS A GENDERED PROCESS

BY

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DISSERTATION

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Ph. D. DISSERTATION

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DEDICATION

To my grandparents
Kathleen Jenkins Mahaffy [1913 – 1998] and Perry Roger Mahaffy, Sr. [1911 – 1999]
whose love and generosity eased my transition to adulthood.

ACKNOWLEDGMENTS

Anyone who has completed a doctoral degree knows that the process is arduous. Financial and emotional support as well as a good research question and a dedicated Ph.D. committee are crucial to successfully completing the process. I have been extremely fortunate to have all of these. My dissertation director, Sally K. Ward, made certain that these four aspects came together. Since my debt to her is greatest, I begin this section by acknowledging her contributions to my success.

In the spring of 1995, Sally and I began what I affectionately call our "lunch discussions." Through these and many other conversations, Sally has challenged me intellectually, encouraged me as an instructor, and supported me as a friend. She shared my enthusiasm for methodology, focused my thinking on the bigger issues at stake, and implored me to take a break once in a while. Sally epitomizes what it means to be a gifted teacher and a wonderful mentor. In addition to setting the standard of excellence to which I aspire, her wise counsel and sense of humor sustained me on days when I would have preferred to quit. Sally also went the extra mile ensuring that I received the financial support I needed to complete my degree. I will always be grateful for Sally's support, patience, friendship, and willingness to entertain my endless series of questions. She has enriched my life. I feel privileged to be Sally's protégé and I hope that this work and my future endeavors reflect well on her.

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As soon as I entered the program, I was lucky enough to meet Margaret Walsh. Peggy was several years ahead of me and her "more senior" perspective on the program

helped a great deal. Getting a Ph.D. is serious business. Over dinner and drinks, Nena Stracuzzi, Peg McKenna, Ning Yang, Wendy Walsh, Kathleen Callaghan, Valerie Hurst, Jody Grimes, and Brenda Jones kept me company. They made me laugh, asked me tough questions about my work, and encouraged me to take this process a little less seriously. As a member of my cohort, Susan Ross and I shared numerous classes and trips to the ASA meetings. I found comfort sharing this experience with her.

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It is fitting to close this section by expressing my deepest appreciation to the person who has shared the past thirteen years with me: Robin L. Gorini. Throughout this process, Robin supported me financially and provided a place where I could have fun! She assumed numerous household responsibilities freeing me so that I could work on my research. And, she tolerated many evenings and weekends alone especially these last two years. I will never be able to thank her enough for bearing with me.

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ABSTRACT

WHEN DOES GENDER MATTER? EXPLAINING THE TRANSITION TO ADULTHOOD AS A GENDERED PROCESS

By

Kimberly A. Mahaffy
University of New Hampshire, May, 1999

Most gender theory and research focuses on two points in the life course: childhood and middle adulthood. Less attention is given to the period in between. The purpose of this dissertation is to determine whether and how the transition to adulthood is gendered. To what extent do school, family, and labor market contexts have a different effect on adolescent girls and boys as they become adults?

Using data from the High School and Beyond 1980 Sophomore Cohort Study (1980 – 1992), I examine how social context differentially affects the plans for the future and adult status outcomes of young women and men. The adult status outcomes are union formation, becoming a parent, achieving residential independence, educational attainment, and occupational status attainment. I also determine whether self-esteem in adolescence has a different effect on these outcomes. I use probit, ordered probit, ordinary least squares, and two stage least squares regression.

My findings indicate that some aspects of the transition to adulthood are gendered. However, the differential effects of social context and other factors are not as numerous or as consistent as we would expect based on the premise of gender theory that gender is a pervasive, organizing framework embedded in all social processes and

institutions. I find that adolescent girls' expected timing of childbearing and socio-economic plans are not interdependent. This was true for adolescent boys as well. A significant relation between the expected timing of marriage and childbearing indicates that adolescent girls are cognizant of their "biological clock" and expect to bear a child sooner than adolescent boys when both plan to delay marriage. I also find that school context is more likely to have a different effect on women's and men's socio-economic outcomes whereas family context is more likely to gender family formation outcomes. I conclude that self-esteem in adolescence is relatively unimportant to adult outcomes.

To make sense of these findings, I articulate a theory of the transition to adulthood as a gendered process by explaining the occasions when gender influenced the process as well as when it did not.

INTRODUCTION

At the close of the twentieth century, Americans recognize and emphasize differences between females and males. For instance, consider how the American Association of University Women's research has dominated the discussion of gender equity in schools. Drawing attention to the drop in girls' self-esteem, girls' failure to completed advanced math, science, and technology courses, as well as the sexual harassment of girls, the AAUW's findings have entered public discourse. We now equate gender equity with promoting programs for girls. And, numerous programs have been developed: all female math and science classes, Take Your Daughter To Work Day®, in addition to mentoring, leadership, and empowerment programs. The underlying assumption is that girls are disadvantaged, suffer as a result, and need help. I do not dispute claims that girls receive unequal treatment or that this has long-term, negative consequences.

However, my research suggests that we need to ask *when* gender matters and not assume that girls are always disadvantaged or that gender is a synonym for "girls." My work shifts the discussion to gender relations and the ways in which social context shapes the experiences of adolescent girls and boys differently. By gender relations, I mean the inter-dependence of adolescent girls' and boys' lives that exists even at the population level. My focus on social context reflects my belief that differences between adolescent girls and boys are a condition of their setting. In other words, under certain conditions being a "girl" or a "boy" is important and results in being treated differently and reaching

different outcomes. Under other conditions, one's sex does not matter. To determine whether and how social context has a different effect for adolescent girls and boys, I focus on the transition to adulthood. In the first three chapters of the dissertation, I explain why I have chosen to explore the relation between gender and the transition to adulthood. I make a further distinction using the phrase the "transition to adulthood" to mean a stage of life and a body of literature. I use the *transitions* to adulthood to represent a set of distinct paths to adult status. I examine five of these transitions in the subsequent chapters. I also distinguish between sex which is a biological distinction that creates "females" and "males," and gender which refers to socially constructed differences between those groups. My work focuses on the latter.

In addition to uniting two bodies of literature, gender and the transition to adulthood, through empirical findings, my work makes another contribution. I posit a theory of the transition to adulthood as a gendered process. The disciplines of psychology and sociology have already addressed gender identity development. The subfields of stratification and socialization provide a perspective on the gendering of the two extremes in human development and achievement: later adulthood and childhood. However, a comprehensive empirical study of gender and the transition to adulthood along with theoretical implications is overdue. My work fills this void.

To do this, I examine the effects of social context (schools, families, and labor market conditions) on adolescent girls' and boys' plans for the future, entrance into family roles, and socio-economic achievements. Chapters 1 and 2 review the pertinent literature and describe my conceptual model. Chapter 3 introduces a contemporary, nationally representative sample of American high school students whose experiences I

study. I also place their experiences in historical context. A number of social reforms have occurred over the last thirty years to differentiate their lives from earlier cohorts. Chapter 4 addresses issues of method: the operationalization of my concepts, modeling and estimation challenges unique to a study this comprehensive, and the bivariate associations that exist between gender and the variables I use. Do adolescent girls and boys begin the transition to adulthood with different resources and experiences? Do they "arrive at" the same place in early adulthood?

Chapter 5 begins the multivariate analysis with an exploratory study of gender, social context, and plans for the future. Does social context have a different effect on adolescent girls' and boys' plans? Are their plans inter-related in the same way? In Chapter 6, I examine whether social context has a different effect on women's and men's family formation and socio-economic achievements. After comparing women and men from similar backgrounds and experiences, are their adult outcomes different? If so, how do we explain this? I also provide descriptive analyses of associations between teen parenting and social context to determine whether White teen mothers and fathers come from different backgrounds. In Chapter 7, I provide a thorough examination of the effects of self-esteem on short-term academic achievements and long-term adult status outcomes. Does self-esteem have a different effect on women's and men's achievements?

Chapter 8 elaborates gender differences in outcomes by focusing specifically on the contribution of race. For which outcomes do race *and* gender matter? At the center of many social policy debates have been the effects of school racial composition. I add to this body of research by determining whether school racial composition has a different effect on adolescent girls' and boys' experiences. In my concluding chapter, I review the

cumulative evidence presented in these chapters to determine whether and how the transition to adulthood is gendered. I articulate a theory based on my empirical findings, and I discuss social policy and future research implications.

CHAPTER 1

GENDERED INSTITUTIONS, GENDERED CONTEXTS, AND GENDERED PROCESSES

As of March 1997, a greater percentage of women had completed high school than men; however men were more likely to earn degrees at the bachelor's level and beyond (U.S. Census Bureau 1997a). Data on earnings and educational attainment from 1996 suggest that the financial return to education is different for women and men as well. For instance, the median income for men with a bachelor's degree working in full-time, year round jobs was $42,017 compared with women's earnings of $30,246 (U. S. Census Bureau 1996, p. 52-53). In terms of marital status, women over age 18 are less likely to be married or single compared with men (U. S. Census Bureau 1997b). What do we make of these findings and what accounts for them?

Patterns such as these suggest that gender relations are deeply embedded in the organization of society. Scholars who study the differences between women's and men's experiences have long argued this, but the factors they point to as determinants vary. Following Acker (1992), Brinton (1988), and Goffman (1977), I propose that institutional practices contribute to gender differences in expectations, experiences, and achievements. In the sections below, I discuss theoretical perspectives that have influenced my understanding of gendered institutions. In addition, I describe the interplay between gender and social context. Thorne (1993) finds that the social context determines whether

differences between young women and men are emphasized or diminished. This has encouraged me to ask: Under which circumstances does gender matter?

Institutional practices and individual actions are the foundation for all social processes. An individual's identity development, participation in formal schooling, childbearing, and the structuring of economic opportunities are examples of social processes. In other words, a social process is an ongoing set of activities that is shaped by the context in which interactions between people take place, and this set of activities moves towards some end. Many social processes are thought to proceed in the same manner for women and men. Acker (1992) challenges this assumption by asserting that all social processes are gendered. This perspective focuses our attention on the ways in which gender is central to the creation and maintenance of hierarchies and social interactions. Not only does gender inhere in these processes, but these processes re-create gender relations. In spite of recognizing this, Acker and many other gender scholars overlook a crucial process as they describe their conceptual framework: the transition to adulthood.

The purpose of my dissertation is to determine whether and how the process of becoming an adult is gendered. With this process as the focus of my research, I explain how we can conceptualize the transition to adulthood as a gendered process influenced by gendered institutions. To establish this, I construct and test a model that draws heavily from a rich tradition in sociology: status attainment research. Later in this chapter, I provide a review of this literature, explain its relevance to my work, and describe how I have adapted the model. In the next chapter, I cover work that has informed my understanding of each component of my model and discuss my research questions.

Gender

Early gender research distinguished between sex and gender by conceptualizing the former as physiological differences between women and men and the latter as socially constructed differences. As an individual characteristic whose meaning derived from social experiences, gender quickly became a variable added to our analysis. This led to widespread documentation of gender differences across a variety of outcomes. More recently, feminist theorists prompted us to not only consider patterns of difference at the individual level, but to also conceptualize gender as a characteristic of institutions and social practices (Acker 1990; Acker 1992; Alway 1995; Connell 1987). According to Acker (1992), we can speak of "gendered" institutions, which means "gender is present in the processes, practices, images and ideologies, and the distribution of power in various sectors of social life" (p. 567).

This shift in perspective calls for identifying the ways in which social institutions contribute to gender differentiation. What would this look like? Gender becomes part of institutions in several ways. The creation of institutional policies and practices based on assumptions about women's and men's abilities, preferences, and commitments reflects the pervasiveness of gender. Devaluing the activities and practices commonly associated with one group (women or men) is another way that gender becomes embedded in institutions. Very often distinguishing women and men along these lines leads to differential treatment and gender inequality.

Social institutions like the state, economy, educational system, and the family are overarching systems that perpetuate gender inequality. Taken to the extreme, Acker's (1992) description can lead us to envision these institutions as if they exist separate from

the individual actors. Yet, women and men carry out their daily activities in specific contexts: within particular families, local schools, and regional labor market constraints. Hence, we might ask: In what kinds of contexts does gender matter?

Thorne (1993) argues that we need to examine gender in context because its meanings and organization change depending on the circumstances. For instance, using gender to create teams fosters a spirit of competition between girls and boys. Under these emotionally charged circumstances, gender increases in importance. However, integrating girls and boys on teams or organizing them according to other characteristics decreases the relevance of gender. Similarly, Connell (1987) claims that "there are times and places where the links [between gender and other social practices] are more extensive and compelling, where...a greater percentage of the social landscape is covered by gender relations; and times and places where they are less" (p. 140). Both of these perspectives suggest that although gender is always present, its importance is a condition of the setting.

If we locate the relevance of gender in particular contexts, then we might find that variations in women's and men's experiences reflect differences in opportunities and resources. We may also conclude that exposure to similar circumstances has a different effect on women and men in terms of their achievements. Thorne's and Connell's arguments also indicate that other social categories (e.g., race, age, ethnicity, social class, national origin, or sexuality) might be contextually more important or interact with gender.

For example, Connell, Ashenden, Kessler, and Dowsett (1982) postulate that female high school teachers may be more influential as role models for highly ambitious,

working class girls than for girls from the middle or upper middle classes because the former group has less exposure to women in professional occupations. Connell and colleagues claim that the presence of female high school teachers would have no effect on the achievements of young men regardless of social class because they have been raised to devalue women. In this example, gender is not the only determinant of an adolescent's achievements. Rather, gender, class, aspirations, and the presence of a female role model interact to influence attainment.

By portraying gender as a system of social relations rather than an individual characteristic, Connell (1987) asserts it is a process that organizes social life. This conceptualization is echoed in Acker's (1992) work. But, how do they define a gendered process? Acker describes gendered processes as: "social interactions that recreate gender, the construction of ideologies, images, and symbols that legitimate gendered institutions, decisions and procedures that construct hierarchies based on gender, and the development of gender identities" (p. 568).

Brinton (1988) provides a more in-depth description of a gendered process in her theoretical work on gender stratification in Japan. Brinton posits a human capital development system that "not only explains the conditions under which women and men *acquire* different amounts of human capital, but the conditions under which their human capital is *evaluated* differently" (p. 308). In a society with a tightly linked school to work transition, strong norms regarding women's family responsibilities and limited financial support for the elderly, Japan provides an exemplary case study of gender stratification processes.

According to Brinton, parents are more likely to invest their resources in a son's education because he will obtain a greater return on the investment as his career matures. Parents provide sons with extra tutoring to prepare them for school entrance exams and enroll them in the best schools to increase the chances that a good company will hire them. When companies hire based on a school's reputation and referral rather than a competitive system that rewards individual achievement, enrolling in the "right" school becomes a near guarantee of occupational success.

On-the-job training in Japan has been the dominant mode of skill formation and usually occurs in early adulthood (Brinton 1988). Consequently, investments made by the company increase the employee's human capital. While sons are groomed for future success, Brinton argues that women receive fewer investments from parents and employers because they are expected to leave the work force once they give birth to a child. Strong norms governing women's age at marriage and childbearing also conflict with the timing of company training thereby reducing women's ability to advance in the internal labor market. Even if women return to work, their earnings hardly match men's. When parents expect their children to financially support them in old age, the decision to invest in sons appears rational. In sum, cultural norms influence the differential investments from both sources (parents and employer) and create very different stratification processes for women and men.

Brinton distinguishes gender stratification from intergenerational mobility processes. According to her, gender stratification refers to processes that originate in allocation processes among *siblings* whereas intergenerational mobility pertains to processes of inheritance/disinheritance among *generations* (p. 316). Thus, gender

stratification begins in the family with parents differentially investing in a son and daughter and is perpetuated by the educational system and occupational structure. Until we have sufficient information on intra-family decision making processes, sibling characteristics, and sibling achievements, I suggest that we focus our attention on the interplay between family, school, work, and labor market conditions to determine how they differentially affect young women and men regardless of sibling sex composition.

The Transition to Adulthood

Many social scientists are interested in the transition to adulthood because it represents the acquisition of roles that are central to society such as worker, spouse, and parent. Recent concerns about out-of-wedlock childbearing and substance abuse among adolescents have rekindled an interest in the transition to adulthood because of the impact that these behaviors have on the individual and society. Although a substantial amount of research has been done on this developmental period, few studies begin by asking whether the process of becoming an adult is different for young women and men.[1] The fragmentation of the literature, now divided into specialties like educational attainment, self-esteem, and family formation, also makes a systematic comparison of young women's and men's experiences very difficult. My work will answer the questions: Is the transition to adulthood different for women and men? If so, how does the process become gendered when we consider a comprehensive set of adult outcomes?

In contemporary North American society, we associate adulthood with at least completing high school, securing stable employment, leaving home to establish an independent residence, marrying, and having children (McLaughlin, Melber, Billy,

[1] I am grateful to Kathleen McCartney for pointing out that Erikson (1968) and Freudian psychoanalysts acknowledge gender differences in the transition to adulthood.

Zimmerle, Winges, and Johnson 1988). Whether and when adolescents assume these roles affect "success" in later life. The transition to adulthood also signifies a period of self-exploration that includes establishing educational and career goals, deciding when one wants to marry and have children, and evaluating one's self. As a result, self-esteem and expectations of one's future become important contributors to the process of becoming an adult.

Research on adolescent expectations found that young women and men differed in their educational, occupational, and family formation plans (Marini 1978a; Marini and Greenberger 1978; Trent 1994). In addition, Marini (1978b, 1980) observed that expectations had a different effect on the educational and occupational attainment of women and men. For example, adolescent occupational expectations had a stronger effect on men's occupational prestige (Marini 1980). It might be that men have greater access to resources that assist them in achieving their goals. This body of literature demonstrates that gender differences and interactions exist, but it fails to determine whether and how contexts other than the family shape young women's and men's expectations and influence their achievements.

After a study by the American Association of University Women concluded that girls experience a more significant drop in self-esteem than boys as they enter adolescence (AAUW 1991; AAUW 1992; Greenberg Lake Analysis Group 1990), research on girls' self-esteem grew exponentially. Yet, the original study and subsequent work have not examined the self-esteem of young women and men past adolescence to determine whether these differences persist. Nor have these studies investigated whether

low self-esteem has a more detrimental impact on women's achievements. I address the latter associations in this research project.

Above, I briefly mentioned the outcomes that research on the transition to adulthood typically examines: family formation, educational attainment, and occupational attainment. I also investigate these outcomes. However, my research expands this body of literature in two ways. By focusing on gender throughout the transition, I systematically and consistently examine how young women and men are differentially affected by social context. In addition, studying these effects for *each* of the adult status indicators adds a comprehensiveness not previously found in the literature.[2]

How might we link social context, individual experiences, expectations, and self-esteem to determine whether the process of becoming an adult is gendered? To answer this question, I review literature that provides a conceptual model for my work, status attainment research.

Status Attainment Research as a Model for Studying the Transition to Adulthood

In the late 1950s, William Sewell and Robert Hauser developed what became known as the Wisconsin model of status attainment. Unlike Blau and Duncan's (1967) model of social mobility that included only father's education and occupation as predictors of son's educational attainment and occupational status, Sewell and Hauser incorporated academic performance and social psychological factors as mediators of the relationship between family background and adult achievements. Figure 1.1 depicts Sewell and Hauser's original model. They altered it during the 1970s by disaggregating

[2] The approach I use to study the transition to adulthood is not the only one in the literature. Many researchers interested in this process examine role timing, sequencing, and duration (Allen and Vliert 1984; Cherlin 1980; Featherman and Sorensen 1984; Hagestad 1990; Marini 1984a, 1984b, 1984c, 1987; Mayer and Tuma 1990; Peterson 1987). Examining identity development is another way to study this period

significant others' influence as well as parents' socio-economic status. Significant others' influence became parents' and teachers' encouragement to attend college, and friends' plans to attend college. Sewell and Hauser also separated parents' socio-economic background into father's education, mother's education, father's occupation, and parents' income.

Testing the expanded model with data from high school seniors living in Wisconsin during 1957, Sewell and Hauser (1975) found that parents' socio-economic status (SES) influenced son's intelligence, but intelligence affected grades and aspirations apart from family SES. Sewell and Hauser also determined that aspirations were strongly and directly linked to their respective outcomes. In contrast to arguments suggesting that socio-economic status was inherited, Sewell and Hauser claimed that motivation (as measured by grades and aspirations) and intelligence were even more important to achievement than family background.

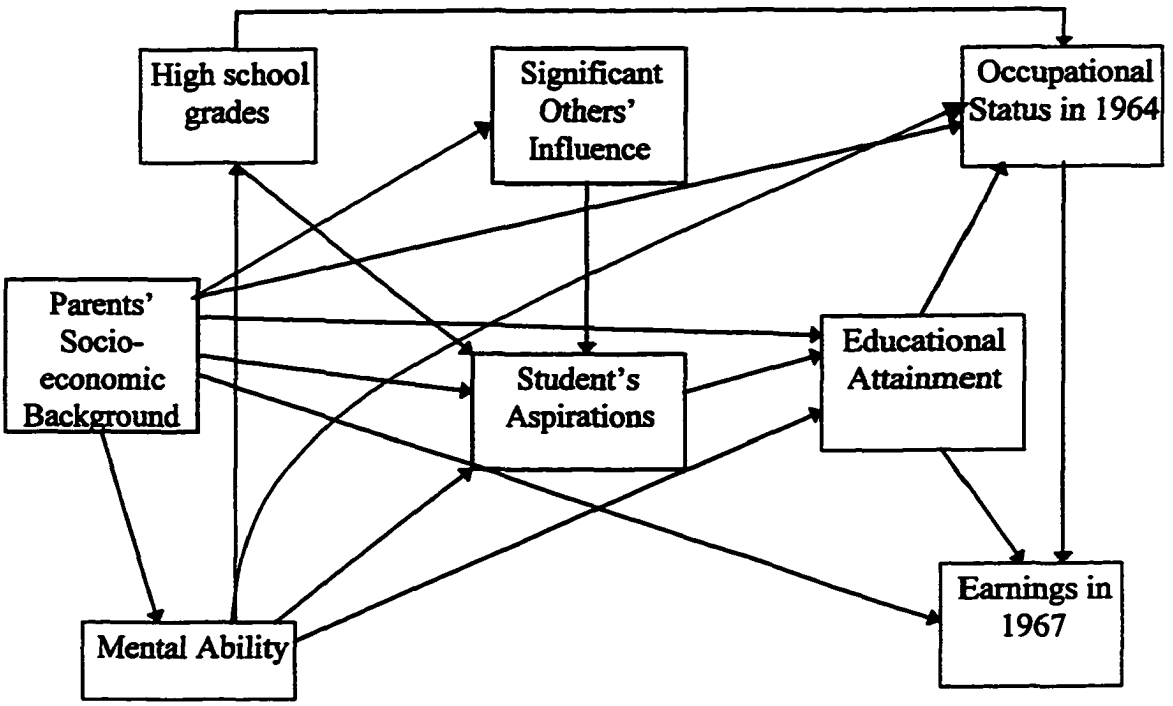
Although this research became the foundation for transition to adulthood studies (Hogan and Astone 1986), it provided little insight into the experiences of women. And, the model was better at explaining White men's achievements than those of other racial groups (Alexander, Eckland, and Griffin 1975; Campbell 1983; Featherman and Hauser 1978; Hout and Morgan 1975; Jencks, Crouse, and Mueser 1983; Otto and Haller 1979; Sewell, Haller, and Ohlendorf 1970; Sewell, Hauser, and Wolf 1980; Wilson and Portes 1975).[3]

(Archer 1989; Erikson 1968; Waterman 1982). A third alternative is to focus on the meaning that this transition has for the young adults themselves (Griffin 1985; Karp 1986; MacLeod [1987] 1995).

[3] A brief history of the development of their model may be informative. Sewell was originally interested in the effects of family and community on educational and occupational aspirations. In a comparative study of rural and urban youth, he found that students from rural communities had lower aspirations than youth from urban areas. But, this difference could be explained in large part by sex, socio-economic status, and ability (Sewell 1964). In a subsequent study of the impact of neighborhood context on college plans, Sewell and

Figure 1.1. The Wisconsin Model of Status Attainment

Source: Adapted from Sewell and Hauser (1975)



Marini (1978a, 1978b, 1980) and Marini and Greenberger (1978) suggest that gender differences in expectations created gender differences in attainment. However, her work focuses primarily on family background as the context that influences women's and

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Armer (1966) expressed disappointment when neighborhoods contributed very little explanatory power net of the other factors. In fact, neighborhood socio-economic status only explained 1.8% of the variance in student's college plans. Yet, their results showed that gender, community, and family SES interacted to influence girls' educational aspirations, but not boys' aspirations (Sewell and Armer 1966, p. 166). Instead of pursuing this gendered phenomenon, Sewell and associates abandoned the examination of contextual effects choosing instead to investigate the influence of family socio-economic status and significant others on status attainment. By 1970, Hauser was a leading critic of contextual analysis claiming it was unable to adequately demonstrate that "the group" influences an individual's outcomes (Hauser 1970a; Hauser 1970b; Hauser 1974). He argued that omitted, relevant, individual level variables are really causing the association we find between social context and individual level outcomes. Hauser (1974) also claimed that several threats to validity make contextual analysis futile: an inability to interpret the effects, the small size of the effects, omitted individual level variables, measurement error, and selection bias in terms of the dependent variable. Many of these criticisms pertain to the methods and data available at the time. Twenty years hence, both have improved tremendously. Duncan, Connell, and Klebanov (1997) and Duncan and

men's plans and achievements. I argue that we need to consider other contexts as potential contributors to gender differences in expectations and attainment. Might labor market conditions, school quality and composition, and family background have a different impact on women's and men's expectations? Does this lead to different achievements?

In spite of its significant contribution, Sewell and Hauser's model has been criticized from various angles. I have chosen to discuss three of the critiques here.[4] First, by focusing on family socio-economic status, the influence of significant others, ability, and aspirations, Sewell and Hauser give the impression that achievements are the result of individual effort and ability (Kerckhoff 1976). Structural constraints and discrimination are not relevant. Although Sewell and Hauser purport to explain structural inequalities, the exclusive use of individual characteristics minimizes the importance of differential access to resources, opportunities, and rewards. As previously noted, their model best explains the income attainment of White men. Its inability to explain the achievements of Black men or White women to the same degree suggests that the process differs by race and gender, but how?[5] Sewell and Hauser's model provides few clues because they remove the individual from social and historical contexts. Therefore, we

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Raudenbush (1998) provide an instructive overview of issues and trends in recent contextual analysis. Despite Hauser's criticisms, this perspective and its related methods continue to yield useful results.

[4] A fourth criticism pertains to method. In their early work, Sewell and Hauser ignored measurement error. In other words, they assumed that their variables were "near perfect" measures of their constructs with the difference between perfect and near perfect measurement being of negligible importance. Of course, many social science researchers operate under this assumption. Until recently, we have not been able to determine the effect of measurement error. However, replications of the model using structural equation modeling with latent variables have been able to account for measurement error (Crouse, Mueser, Jencks, and Reichardt 1979; Campbell 1983, Hauser, Tsai and Sewell 1983). Many of these replications find that measurement error biases the results. Yet, Crouse et al. (1979) note that choosing this technique does not always lead to better estimates since the structural equation model with latent variables requires a different set of assumptions that are not easy to meet.

[5] I have yet to find a study based on the Wisconsin model that includes Black women. Most of the studies compare Black and White men. Comparisons between women and men have been limited to Whites.

must conclude that either the stratification process works the same for everyone across all time periods, or that their model is seriously misspecified. I presume the latter.

Sewell and Hauser have also been criticized for their application of Meadian social psychology. Haas and Falk (1981) suggest that the concept "significant others' influence" is evidence that Sewell and Hauser were influenced by Mead. To be faithful to Mead's conceptualization, one would need to study the reciprocal relations between individuals and their social context since reciprocity is a key component of Meadian social psychology (Strauss 1977). Sewell and Hauser fail to incorporate this.

The final criticism of Sewell and Hauser's work is that the majority of it ignores women's experiences (Sewell, Hauser and Wolf 1980 is the notable exception). England (1992) claims that status attainment research as a whole has been less successful at predicting women's occupational attainment. It especially falls short when attempting to explain the gender gap in earnings. According to England, refining the status attainment model will do little to explain why women earn less than men, why occupational sex segregation continues, and why female dominated occupations pay less. To put it bluntly, England believes that status attainment models are useless for explaining patterns of occupational sex segregation and the devaluation of women's work because they fail to take into account factors that influence women's occupational achievements such as family responsibilities, discrimination, and other structural constraints that differ for women and men. England's criticisms in particular beg the question: Why would I use this model if it is such a poor predictor of women's occupational achievements?

To answer this question, I need to identify the differences between the goals and assumptions of my work and the goals and assumptions of status attainment research. The

primary goal of status attainment research is to explain how people become distributed in the social hierarchy. Most of these researchers use middle aged adult occupational achievements (usually status and earnings) as the outcome in need of explanation. These researchers add various correlates of occupational attainment to better predict "where one ends up." Two components of the process draw the attention of status attainment researchers: occupational attainment (the final outcome) and the contribution of parents' socio-economic status.

A major impetus behind status attainment research has been to demonstrate that socio-economic status is not inherited from one's parents, but that American society functions like an open, competitive market rewarding hard work and ability regardless of one's race, gender, or class. Kerckhoff's (1976) and England's (1992) criticisms suggest that this is a very naïve way to understand individual achievement. Instead, they argue that "success" results from structural constraints that shape individual experiences, attitudes, and perceptions. Further, structural constraints benefit some by providing them with opportunities while blocking others' attempts to achieve the same goals. If status attainment researchers believe that everyone is treated the same and that the only "true variables" are individual ambition and intelligence, then the absence of social context in their model makes sense. However, I am making no such assumptions. As I have already indicated, we need to determine whether women and men receive different benefits from context. If they do, then we need to explore how these affect their achievements.

Besides incorporating the influence of social context, my work differs from status attainment research in another respect. As Sewell, Hauser and Wolf (1980) found, educational attainment was a strong predictor of occupational attainment for women and

men, but marital status and the presence of children distinguished women's achievements. With the exception of their 1980 study, the majority of Sewell and Hauser's work fails to consider the influence of marital status and the presence of children on adult achievements. If most of the husbands in their sample had wives who remained at home to care for children, then the exclusion of these factors makes sense because they would have no effect on men's attainment. However, these factors differentiate women's experiences from men's. Therefore, they are important to include in my model.

My approach requires that we consider marital status, the presence of children, educational attainment, and occupational attainment as outcomes *and* factors that influence each other. I add another adult status indicator that is unique to twentieth century American culture: living independent of one's family of origin. Residential independence is influenced by the economy, one's income, and the acquisition of other adult status roles. In this regard, the transition to adulthood is not one transition, but many inter-related transitions.

Sewell and Hauser's unidirectional model with one ultimate outcome (earnings) masks the complexity of becoming an adult. By distinguishing the family, school, and labor market experiences of women and men, examining the transition to adulthood across several indicators of adult status, positing that some of these indicators influence each other, and emphasizing the importance of social context, I provide a more complete analysis of the process of becoming an adult.

As indicated earlier in this chapter, other social categories interact with gender. A well-established body of literature finds that the transition to adulthood varies by race

(e.g., Brewster 1994b; Hout and Morgan 1975; Kerckhoff and Campbell 1977; Kuo and Hauser 1995; Michael and Tuma 1985; Reeder and Conger 1984). Therefore, I include race as a factor that may differentiate women's and men's experiences.

Figure 1.2 illustrates my conceptual model. I posit that gender is associated with each of the adult status indicators that I represent as family formation, educational attainment, and occupational attainment. In addition, I suggest that gender is related to the contextual factors such as school quality and composition, family structure, socio-economic status, and size as well as an individual's experiences, self-esteem, and plans for the future. In short, I assume that there will be gender differences across many of these dimensions; however, race may interact with these effects.

The darkened lines in the model imply that gender interacts with each of the contextual and individual factors. Finding an interaction would suggest that these contexts have a different effect on women's and men's experiences and achievements. These differences may also be distinguished by race. When considering the model as a whole, interactions at various stages would suggest that the process is different for women and men. An additional way to demonstrate that the process is gendered is to show that women and men "under the same conditions" have different levels of achievement because they initially start with different resources. I pursue this approach as well.

Unlike Sewell and Hauser, I posit that family formation, educational attainment, and occupational attainment influence each other and have a different effect for women and men. The darkened, double arrowheads at the far end of the model represent this aspect.

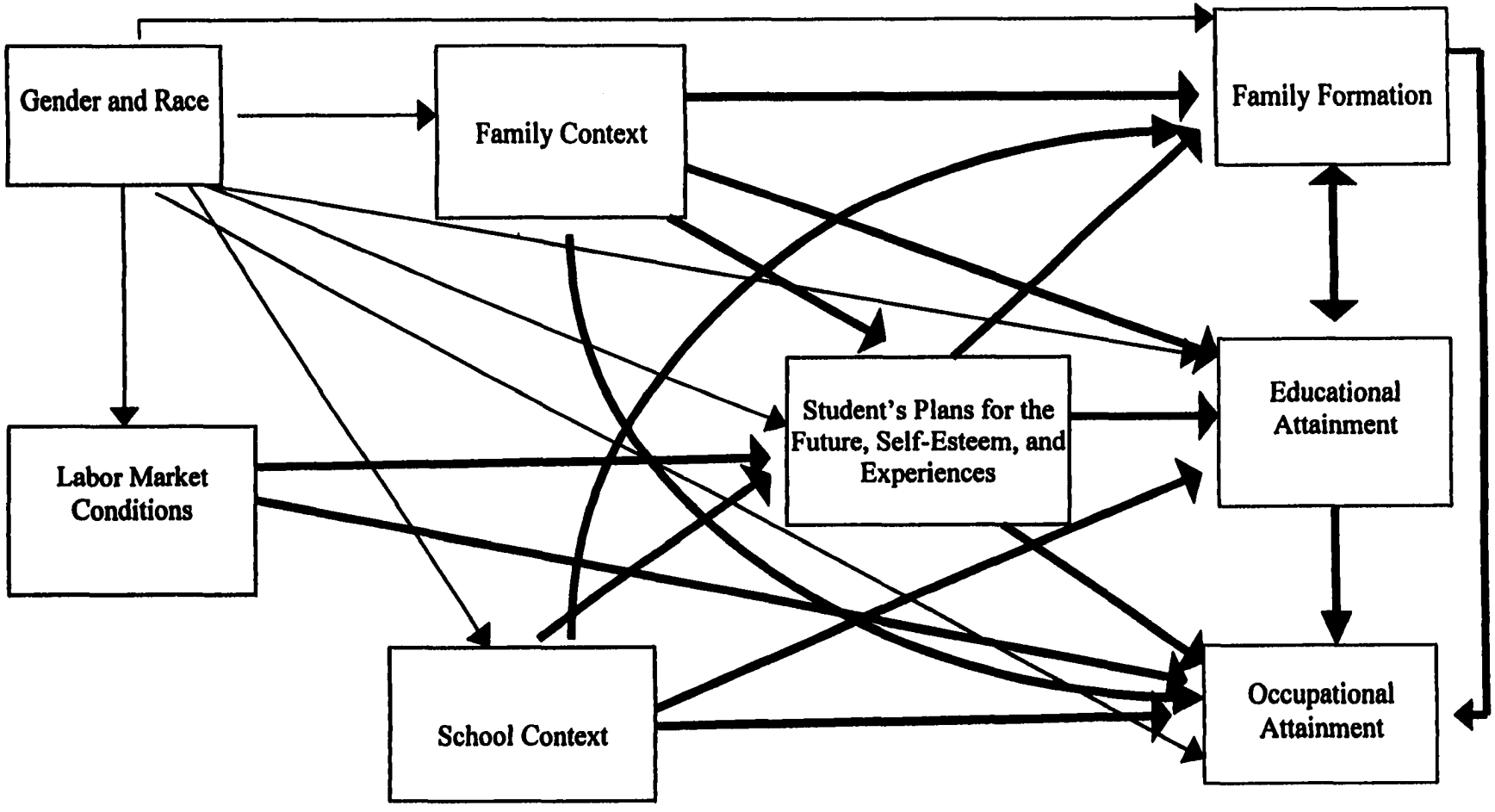
Summary

In the previous sections, I suggested that gender is a pervasive organizing framework that permeates our institutions and differentiates women's and men's experiences. Yet, the relevance of gender (at the individual level) may depend on the context. Are there specific circumstances that affect women and men differently? Under which circumstances are their experiences and achievements similar?

Status attainment research finds that a young man's family background influences his aspirations and achievements. Significant others also have an impact on his aspirations. To what extent do family, the educational system, and labor market conditions differentially affect women's and men's plans for the future and attainment?

In the next chapter, I summarize literature on the effects of social context, schooling and work experiences, self-esteem, and plans for the future on family formation, educational attainment, and occupational attainment. Throughout, I discuss gender differences in experiences and achievements. As my review will make clear, a significant gap in the literature remains. We have yet to understand how gender interacts with social context and individual level factors to create a gendered transition to adulthood.

Figure 1.2. A Conceptual Model of the Transition to Adulthood as a Gendered Process



CHAPTER 2

SOCIAL CONTEXTS AND INDIVIDUAL EXPERIENCES: CONTRIBUTORS TO A GENDERED PROCESS

In the previous chapter, I suggested that the transition to adulthood is not gender-neutral. Instead, social contexts may have a different effect on women's and men's schooling and work experiences, plans for the future, and self-esteem. In turn, these individual level factors may have a different impact on women's and men's adult achievements. The contribution of my work is to undertake a systematic and consistent examination of the interaction between gender and various factors associated with adult achievements to determine whether and how they have a different effect on women and men. But, why emphasize social context and how might it affect women and men differently?

Sociology as a discipline was founded on the principle that our plans, beliefs, and actions are the product of our group membership and the historical period in which we live. We not only live in a particular historical era and society, but a wealth of research finds that an individual's behavior is affected by local contexts such as neighborhoods, schools, families, and labor markets (e.g., AAUW 1992; Alexander and Eckland 1975; Brooks-Gunn, Duncan, and Aber 1997; Crane 1991; Jencks and Mayer 1990; Mayer 1991; McLanahan and Sandefur 1994; Sampson, Raudenbush, and Earls 1997; Wilson

1996). Much of the aforementioned literature assumes that social context has a similar effect on the experiences of young women and men.

The gender theorists I mentioned in the previous chapter challenge that assumption (Acker 1992; Alway 1995; Connell 1987; Goffman 1977). However, their work as with most gender theories, emphasizes the importance of gender at two points in time: socialization in childhood and structural inequality in adulthood. Theories on the gendering of the transition to adulthood focus primarily on identity development (Archer 1989; Chodorow 1978; Erikson 1968). My work unites these two theoretical perspectives by examining how social institutions shape the process of becoming an adult differently for young women and men. I also include social psychological elements like the structuring of plans for the future and self-esteem as well as factors that bear on later social positions: education, family, and work.

Gender socialization theory posits that girls and boys learn sex appropriate behavior in childhood. Most of these theories suggest that sex appropriate behaviors become ingrained in childhood and are manifested throughout adulthood (Howard and Hollander 1997). Research on parent-child interactions provides evidence that parents socialize girls and boys differently (Block 1983; Maccoby and Jacklin 1974). Other empirical studies use gender socialization as a plausible explanation for gender differences in outcomes without actually determining whether differential socialization occurred (e.g., Brown and Mann 1990; Elliott 1988). My work tests gender socialization through an investigation of same sex role modeling, however, the majority of my work is framed in terms of structural inequality.

A structural inequality argument claims that social institutions distribute resources and opportunities differently to women and men with women obtaining less power and fewer resources and opportunities on average (Howard and Hollander 1997, p. 39; Reskin and Padavic 1994; Risman 1987). In turn, these differences affect what women and men achieve. For the most part, this perspective is concerned with adult income inequality and explaining why women continue to earn less than men. Drawing on this perspective, I determine whether adolescent girls and boys start with a different set of resources and I determine whether they accrue different benefits from those resources, the aspects of social context that I examine. Because no comprehensive gender theory exists that would explain how the transition to adulthood becomes gendered, I use my empirical findings to reflect on and expand our gender theories.

What does it mean to say that social contexts have a different effect on young women and men? One way to think about this is to ask whether young women and men receive different benefits from "similar investments." Or, do young women and men start out with different levels of "investments" that happen to create differences in their outcomes? For instance, previous research suggests that parental monitoring of school progress has a positive influence on educational achievement (Astone and McLanahan 1991; Bogenschneider 1997; Furstenberg and Hughes 1995). If we examine parental monitoring of girls and boys, we might find that parents monitor girls' progress more closely. If this is the case, then we would expect girls' achievements to be greater because they received more attention. This would reflect a gender difference in attention and subsequent achievement.

My work goes beyond the additive approach (girls get more attention which leads to their greater achievement) to determine whether gender and the monitoring of academic progress *interact* to affect educational outcomes. Perhaps the positive impact of monitoring depends on gender. Another way to think about this is to ask whether monitoring boosts girls' educational achievements while having a different effect on boys' achievements. It may be that close monitoring has no effect on boys' educational achievements and a positive impact on the educational achievements of girls. Posing the question this way suggests that the influence of social context on young adult outcomes *depends on* gender. Finding differential effects from adolescence to adulthood would suggest that the transition to adulthood is gendered.[6]

In the remaining sections, I focus on three contexts that are central to the transition to adulthood: labor market conditions, family context, and school context. I note their relevance to schooling and work experiences, self-esteem, and plans for the future. Much of the literature finds gender differences. Fewer studies examine the differential impact of social context on women's and men's experiences and early adult achievements. This is a void that my work fills.

Labor Market Conditions

According to Hill and Yeung (1997), the transition to adulthood is shaped by three factors: attitudes and orientations toward life, opportunities and resources, and luck. Labor market conditions are one set of opportunities that refer to a variety of factors including the rate of unemployment, the nature of the jobs that are available, and the

[6] I would like to thank Sally K. Ward for suggesting this example as a way to clarify the difference between the additive and interactive effects of gender.

number of adults who might fill them.[7] Previous research suggests that local unemployment has the same effect on the aspirations and early work experiences of young women and men (Anderson 1991; Freeman 1982; MacLeod [1987] 1995; Wilson 1996).

Anderson (1991), MacLeod ([1987] 1995), and Wilson (1996) argue that the lack of jobs in urban areas decreases the aspirations of inner-city, poor youth. When these young women and men believe that continuing their education has no effect on their ability to get a good job, they turn to early parenthood as a means of achieving adult status. Anderson (1991) and Wilson (1996) also assert that growing up in a community plagued by persistent joblessness reduces young Black men's commitment to marriage and prompts young Black women to "make it" on their own as single parents. The end result is a cohort of economically disadvantaged, Black adolescents from the inner-city who have little education, sporadic work experience, bear children at an early age, and marry late, if at all. Yet, Anderson and Wilson, in particular, focus on a small segment of the adolescent population. When we include adolescents who live in suburban and rural areas as well as those who are "wealthier," do we find the same patterns? Does high unemployment encourage both young women and men to lower their expectations? Or, are young women more likely than men to reduce their educational expectations and form a family early?

[7] In their definition of labor market conditions, Billy, Brewster, and Grady (1994); Brewster (1994a, 1994b); Brewster, Billy, and Grady (1993); and Freeman (1982) include the percentage of females in the labor force, opportunities for female employment, male versus female unemployment rates, proportion of youth who are idle, percentage of White collar jobs, and index of industry mix. Unfortunately, the data I use for this dissertation preclude me from examining conditions other than unemployment rates. Hill and Yeung (1997) point out that "opportunities can vary in terms of how expansive they are for the population as a whole and in terms of their availability to individual members or subgroups of the population" (p. 5). Therefore, my use of a "generic" labor market indicator like unemployment rates as opposed to women's and men's unemployment rates may underestimate their differential impact on women and men.

Research on the effects of standard metropolitan statistical area (SMSA) unemployment rates on teen labor force participation suggests that young women and men are affected in the same way. Labor force participation rates refer to the percentage of work age individuals in the workforce whereas unemployment rates refer to the percentage of the workforce without a job and looking for work. Freeman (1982) found that as the unemployment rate increased, the labor force participation rate of young women and men ages 16 to 17 decreased, but unemployment rates had no effect on labor force participation of older youth. In this case, limited job opportunities made it equally difficult for young women and men to find work when they were school age. These aggregate trends may be different at the individual level. Specifically, I hypothesize that high unemployment reduces the likelihood that young men work during high school while having no effect on the labor force participation of young women. This would be true if young women were more likely to abstain from early work experience or participate in "informal work" like baby-sitting.

When we shift the focus to the effects of labor market conditions on *adult* outcomes, the research suggests that labor market conditions have a different impact on young women and men. For instance, Buck and Scott (1993) discovered that national unemployment rates increased the likelihood that young men would remain at home, but had no effect on young women's leaving home. Pirog and Magee (1997) also highlight a pattern in the relation between labor market conditions, gender, and educational attainment. Although local unemployment rates were not significantly related to the likelihood of completing high school by ages 19 and 26, the signs on the coefficients were different for women and men. Specifically, local unemployment was positively

related to women's completing high school and negatively related to men's high school completion. This suggests that labor market conditions have a different effect on women's and men's high school completion.

If local unemployment affects educational attainment according to the pattern noted in Pirog and Magee (1997), I may find that over the long term it causes women to increase the total amount of education they complete, whereas it limits men's educational attainment. In addition, I might find that it delays marriage for both women and men—giving women a chance to increase their education and reducing the marriage opportunities for men because they are sporadically employed (Wilson 1987). I propose that we examine whether local labor market conditions have a different impact on women's and men's plans for the future. Then, we need to determine whether these outcomes have a different effect on educational attainment and family formation.

School Context

Schools play an important role in the lives of many adolescents. In this context, they acquire not only intellectual skills, but also social skills. A student's experiences here shape future plans and accomplishments. Recent studies on the educational experiences of young women suggest that girls find little support and encouragement in schools (AAUW 1992; Lee, Marks, and Bird 1994; Orenstein 1994; Taylor, Gilligan, and Sullivan 1995). Although gender equity policies have called for a re-organization of school activities to provide equal opportunities for girls, some argue that we have lost sight of boys' needs in the process (Pappano 1997). This is not the only debate raging in the literature.

A recent American Association of University Women's forum questioned the beneficial effects of single-sex schooling (AAUW 1998). After much research showed that girls had a different and mostly negative experience in co-educational schools, many advocates for girls suggested a return to single sex education in the United States (for a review of the literature see AAUW 1992; Sadker and Sadker 1994). Early studies of girls' achievement in single sex institutions found that they outperformed girls in coeducational schools (Lee and Bryk 1986; Riordan 1985). More recent studies suggest that the benefits that these girls received were attributable to factors other than the sex composition of the school (AAUW 1998; Marsh 1991; Marsh 1989a).

This brief exposure to debates in the education literature immediately raises the questions: Do gender and school context interact? Do adolescent girls receive an added benefit from attending a single sex school that boys do not? Do other aspects of school context have a different effect for young women and men? Do they affect the long-term outcomes of women and men differently? Most research on school context examines short-term educational outcomes such as achievement test scores and the likelihood of completing high school. If there are differential benefits, we need to know whether they last. Answering these questions is an important goal of my research.

Unlike the literature on labor market effects, which portrays these conditions as a gender-neutral influence, there is an extensive body of literature that describes schools as gendered institutions (e.g., Connell 1997; Connell, Ashenden, Kessler and Dowsett 1982; Eder, Evans, and Parker 1995; Thorne 1993). However, this work typically combines separate indicators of school quality and composition (e.g., per pupil expenditures, students per teacher, race and sex composition of students and faculty, socio-economic

status of the school, college enrollment rates, social capital, and school type) into broad, class based descriptions.[8] This approach overlooks the variation in these indicators and fails to determine whether they have an independent and different effect on women and men. By investigating whether these aspects of school context affect women's and men's achievements and experiences differently, I call into question the assumption that these particular school policies and practices are gender-neutral.

There are several school characteristics that I classify under school quality and composition. These include: sex composition of the students and faculty, per pupil expenditures, students per teacher, racial composition of students and faculty, socio-economic status of the school, college enrollment rates, social capital, and school type. Most are associated with short-term, academic achievements. We know very little about their influence on occupational attainment and family formation (Mayer 1991 is an exception). Even less research has determined whether school context interacts with gender to enhance the long-term achievements of women (or men). If our institutions are gendered, then the influence of school context on women's and men's achievements should reflect this.

Of the school quality and composition characteristics that I investigate, the sex composition of the student body has received the most attention as a school policy that affects women and men differently. Below, I distinguish between sex composition of the classroom and sex composition of the school. My work focuses on the latter.

[8] Following Gamoran's (1987) example, I distinguish between school composition and schooling experiences. The former refer to factors that are truly exogenous to the student, aspects of the school over which students have no control. The latter refer to factors that students can theoretically choose. These would include academic track, the number and type of courses they take, and their scores on standardized tests. I address the former in this section and the latter in the section on individual experiences.

Classroom interactional patterns between teachers and students receive the most scrutiny in the literature on gendered school contexts. On the one hand, Orenstein (1994) and Sadker and Sadker (1994) claim that teachers pay less attention to girls' efforts to participate in class discussions and focus their attention on boys. Canada and Pringle (1995) also conclude that interactional patterns in the college classroom were dependent on the proportion of men in the class. In their study, college age women were less likely to continue a class discussion as the proportion of men increased. The opposite was true for men. Although these studies suggest that young women and men are treated and respond differently in the classroom, none of these studies links gendered interactional patterns to educational attainment. If men do not receive an added benefit from extra attention and greater participation, perhaps gender differences in classroom interactions do not matter.

My work moves us beyond the classroom to the sex composition of the school. This takes two forms: the proportion of female students and the proportion of female teachers in the school. Some scholars find that girls benefited more than boys did from attending single sex schools (Lee and Bryk 1986; Riordan 1985, 1990). Other evidence suggests that the benefits of single sex schooling do not consistently accrue to girls. Rather, boys received greater benefits from single sex education in terms of their overall educational attainment, the number of math courses they complete, and the number of foreign language credits they earn (Marsh 1989a).

Contrary to Lee and Bryk's (1986) findings, Marsh (1989a) demonstrated that the apparent benefits that girls received from single sex schooling could be explained by pre-existing differences in achievement, course work, and a variety of social psychological

factors. Stated differently, girls who attended single sex Catholic schools completed different courses, scored higher on sophomore year achievement tests, and had different psychosocial characteristics compared with girls in coeducational Catholic schools. These differences accounted for the apparent single sex school advantage in achievement test scores.

Additional studies point to the differential benefits of single sex education. Riordan (1985) concluded that boys from single sex Catholic schools completed more education than boys from co-educational public schools, and the same amount of education as boys from co-educational Catholic schools. This difference did not hold for girls. Rather, girls who attended a single sex Catholic school completed the same amount schooling as girls in co-educational Catholic and public schools. Marsh (1991) determined that boys in single sex Catholic schools completed more math courses than their counterparts in coeducational Catholic schools. Girls' achievements were not enhanced as a result of attending a single sex school. And, their self-esteem was not higher than that of girls in co-educational schools. Overall, Marsh concluded that single sex Catholic schools did not provide a distinct advantage for young women or men when compared with students in co-educational Catholic schools.[9]

From this research we can infer that gender does interact with the sex composition of the student body, but young women receive fewer benefits. I would also like to suggest that the "true effect" of the sex composition of the student body is masked when we dichotomize this indicator into all female (or male) and co-educational schools. Schools vary in the proportion of girls who attend. Perhaps as Canada and Pringle (1995) note, a

[9] The differences between Marsh (1989a) and Marsh (1991) are the inclusion of public school students and the kinds of additional controls he added: degree of discipline and academic orientation.

decrease in the proportion of young women in the school is more consequential than whether the school is "all girls" or "all boys." Similarly, when we limit the study of sex composition effects to Catholic schools, we miss the variation in sex composition that exists in public and other private schools. My work investigates whether the proportion of female students has an independent effect on women's and men's experiences and achievements apart from school type. By examining the variation in the sex composition of the student body, we can determine who benefits and how it impacts later attainment. In the end, does an increase in the proportion of female students boost women's achievement over that of men's? This is a question I seek to answer.

A school's sex composition can refer to more than the proportion of female (or male) students in the school. It can represent the proportion of female (or male) teaching and administrative staff employed by the school. Some scholars argue that the teaching staff serve as role models for youth (e.g., Connell, Ashenden, Kessler and Dowsett 1982; Kessler, Ashenden, Connell, and Dowsett 1985; Riordan 1990). They also claim that the sex and racial composition of the school's teachers affect students of the same sex and race. In other words, they presume that students benefit from being surrounded by adult role models from the same social categories. However, we are never sure how many role models are needed to have an impact. One or two might not be sufficient.

Instead, I hypothesize that there is a nonlinear relationship between student performance and the percentage of same sex and race faculty. To some unspecified percentage, hiring more staff who match the social composition of the students might enhance student expectations of the future and their actual attainment, but beyond this point additional hires may have no impact. It is also possible that the positive benefits

diminish as the proportion reaches 100%. Beyond majority, a student's identification with same sex (or race) role models may become taken for granted and lose its beneficial effect. Or, the minority group members, now in the majority as teaching staff, no longer provide students of the same sex (or race) with "special treatment" that stemmed from their shared affiliation. Under these conditions, I may find a "correction factor"—the diminishing of positive outcomes. Moreover, we would expect the sex and racial composition of faculty to influence only students of the same sex and race if role modeling is based on these factors alone.

Connell, Ashenden, Kessler and Dowsett (1982) provide a description of the link between professional, female role models and working class girls' aspirations and achievement in public schools. They posit that working-class girls, more so than middle and upper class girls, have little exposure to professional women. This lack of contact limits their aspirations and later attainment. However, female teachers can serve as role models for these young women and raise their ambitions. Having said that, Connell and colleagues qualify this by claiming that when female students become conscious of the power differential between female teachers and male headmasters, the positive role model effect may be negated. Thus, it may not be the sheer number of female faculty, but their position in the school hierarchy relative to men's positions that may have the greatest impact on the aspirations and achievements of working class young women. Connell et al. (1982) argue that young men regardless of class will be unaffected by the presence of female faculty because they have been socialized to devalue women. Based on this work, we would assume that gender interacts with the sex composition of the faculty and administration as well as the social class of the student to influence

aspirations and achievements. This is a very complex relationship that I intend to investigate.

Another aspect of school context that may affect young women and men differently is the school's academic orientation. Previous research suggests that the academic orientation of the high school had a positive effect on a student's educational attainment (Marsh 1991; Riordan 1985, 1990, 1994). This association is further refined by claims that single sex schools were more academically oriented (Riordan 1985, 1990, 1994) and that Catholic schools had a stronger academic orientation than public schools (Marsh 1991). What do they mean by "academically oriented"?

Marsh (1991) and Riordan (1985, 1990, 1994) define academic orientation as the percent of students who report being in the college preparatory track, the percent of students who rate their academic instruction as good or excellent, and the amount of time that students spend on homework. These indicators *may* reflect school policy, but they are also heavily influenced by choices students make. I assert that the percent of students in the preceding senior class who enroll in college may be a better measure of the school's academic orientation particularly when we compare youth who attend schools of the same type and socio-economic status. Using information on an earlier cohort is more likely to reflect school policy whereas the indicators that Marsh and Riordan use conflate student choices and school policies.[10] Yet, neither scholar examines the extent to which the school's academic orientation affects women's and men's educational attainment differently. This is a question I seek to answer.

[10] Using a single item indicator to represent a complex construct also has its problems. However, I believe that the benefits of using one exogenous indicator to assess this aspect of school context outweigh the problems inherent in Marsh's and Riordan's measures.

Research on school socio-economic status (SES) suggests a link between school socio-economic status and educational attainment (Alexander and Eckland 1975; Meyer 1970). High SES schools had students with higher educational aspirations and attainment even after comparing students with the same ability and family socio-economic background. When they controlled for school SES, Alexander and Eckland (1975) concluded that men still completed more education than women. Mayer (1991) found that school SES had a significant impact on the likelihood of dropping out of high school between tenth and twelfth grade. After controlling for the student's race and family socio-economic background as well as the proportion of Black and Hispanic students in the school, she found that students from high SES schools were less likely to quit school.

When Mayer held the same background factors constant, she also determined that girls in high SES schools were less likely than girls from low SES schools to have a child between tenth and twelfth grade. Previous research tells us little about whether school socio-economic status has the same effect on women and men. Does attending a high SES school boost men's educational achievements over women's? Does attending a low SES school have a greater impact on the likelihood that young men will father a child early?

The effect of the racial composition of schools on women's and men's achievements is less well known. Most studies do not examine its influence on adolescent girls and boys separately. Contrasting the effects of racial and socio-economic composition, Mayer (1991) found that the proportion of Black students in the school had no influence on the likelihood of dropping out of school or a girl's chances of becoming a teen parent after controlling for school socio-economic status. My research extends

Mayer's (1991) work by asking a question she does not: To what extent does gender interact with school racial composition to affect young adult outcomes including educational attainment and family formation?

In the preceding paragraphs, I identified aspects of school composition that might differentially affect women's and men's outcomes. In the remaining paragraphs, I briefly review school quality indicators that may also interact with gender. These include: student/teacher ratios, per pupil expenditures, and social capital investments. To my knowledge, only Pirog and Magee (1997) examine the interaction between school quality indicators and gender as it influences educational attainment. Consequently, a further investigation of the relationship between gender, school quality, and attainment would prove useful.

There are a number of reasons why we might expect school spending and the ratio of teachers to students to affect student achievement. Schools with greater financial resources can use this money to attract better teachers, purchase new materials, and maintain their facilities. Presumably, schools with more money could also hire additional teachers and reduce class size. Under these "optimal" conditions, student learning would be enhanced. Nevertheless, the link between gender and these school quality indicators has yet to be examined systematically. Not only do we want to know if parents are more likely send to boys (or girls) to schools with higher expenditures and smaller student/teacher ratios, but we need to ask whether boys (or girls) receive an added benefit from this.

The empirical findings pertaining to per pupil expenditures, teacher/student ratios, and achievement are mixed. Hanushek has consistently shown that per pupil expenditures

and the ratio of teachers to students had very little if any effect on student test scores (Hanushek 1981, 1986, 1996). Yet, Hedges and Greenwald (1996) found that teacher-pupil ratios had a positive impact on students' educational outcomes.

Other research indicates that per pupil expenditures and teacher-pupil ratios had no effect on the likelihood of dropping out of high school or obtaining a high school diploma once additional school characteristics were controlled (Ehrenberg and Brewer 1994). When they compared women's and men's educational attainment, Pirog and Magee (1997) found that the teacher-pupil ratio had no effect on obtaining a high school diploma (or GED). Perhaps, the influence of these school quality indicators is masked when women's and men's achievements are combined. Or, the impact of school quality may appear later. We do not know until a systematic examination of gender and school effects is undertaken.

Recently, a third indicator of school quality has been addressed in the sociology of education literature, social capital. Coleman (1988) introduced this concept describing it as a resource that accrues to individuals and groups as a result of social ties. Strong ties, a resource network based on trustworthiness and obligation, information channels, and effective norms are forms of social capital. Although Coleman explained that social capital might exist in different degrees depending on the school type (it was highest in Catholic schools), most of the research on social capital has depicted it as a characteristic of families.

Pong (1997) elaborates the school based portion of Coleman's argument. She asserts that social capital inheres in the school and enhance children's academic

achievement even when many of the students come from single parent families.[11] One way to conceptualize social capital as a school characteristic is to define it as the extent to which parents are involved in their child's school and are acquainted with other parents whose children attend that school (Pong 1997). From a social capital perspective, the *aggregate* (not the individual) ties to the school are important in determining the child's success.

Pong finds that parental participation in the school had a significant, positive impact on the reading and math achievement of tenth graders. In contrast, she determined that the participation of parents (at the individual level) had no effect on tenth grade achievement. Hence, Pong claims that even students whose parents did not participate in their school reaped benefits from the involvement of other children's parents. Yet, when girls and boys attended schools with the same amount of social capital and came from the same family backgrounds, girls outperformed boys in terms of reading achievement, but they performed similarly on the math achievement test. The question we need to ask is whether school social capital boosts the achievements of girls over that of boys. Put another way, are the achievements of one group more sensitive to social capital investments in the school?

With the exception of Pong's (1997) work, the above studies paint a rather dismal picture of the effects of school quality on student achievement. Moreover, only Pirog and Magee (1997) examine whether these characteristics affect young women's and men's achievements differently. They conclude that there is no interaction between gender and teacher-pupil ratios when predicting the likelihood of obtaining high school certification.

[11] Coleman (1988) argues that single parent families are in the least favorable position to cultivate social capital because they have less time to invest in their children.

In other words, neither girls nor boys receive an added benefit from being in schools with more teachers per student. Yet, what remains to be investigated is whether school quality indicators interact with gender to affect the attainment of other educational credentials beyond the high school diploma. Perhaps the benefits appear later.

Peers and teachers are also part of the school context and exert an influence on students' decisions and behaviors. We consistently find a positive association between friends' plans to attend college and the respondent's own aspirations and achievements (Furstenberg and Hughes 1995; Hallinan and Williams 1990; Marini 1978b; Sewell and Hauser 1975; Sewell and Hauser 1980). But, the influence of these peer plans on women and men may differ.

Previous research suggests that men receive a greater benefit from friends' plans than women do although this benefit appears to diminish over time (Sewell, Hauser and Wolf 1980). In particular, friends' college plans had a stronger, positive impact on men's educational and occupational aspirations and educational attainment compared with women. Yet, friends' educational plans had a different impact on occupational status. Although friends' plans had a negative effect on the status of women's first jobs and no effect on the change in status by the most recent job, friends' educational plans had no effect on men's *occupational* status regardless of when it was measured. It appears that the benefit men receive from their friends' college plans does not last.

Marini (1978b) adds a caveat to the generalizations noted above. She asserts that friends' educational expectations were positively associated with respondent's educational expectations and age at first marriage of *both* women and men, but the impact was slightly stronger for women. In a later study, Marini (1980) suggests that by

focusing only on the occupational attainment of currently working women (as opposed to ever employed women), Sewell, Hauser and Wolf (1980) may have underestimated the effect of friends' educational plans on women's attainment. Stated differently, the women from Sewell, Hauser, and Wolf's study who were still working by the mid 1970s might be different from those who ceased working in ways that are related to the influence of friends' educational plans.

We might also want to differentiate the influence of friends' educational plans by race of the respondent. Hout and Morgan (1975) found that young Black men's educational plans were unaffected by friends' plans whereas the educational plans of young Black women and White youth were positively associated with friends' educational plans. From this study, we might expect that women's plans are reinforced by their friends' educational expectations, but race affects the influence of friends' plans on men's educational expectations. Whether this translates into higher achievements for women as opposed to men remains to be determined.

Research on girls' experiences in school suggests that teachers provide more attention to boys (AAUW 1992; Orenstein 1994; Sadker and Sadker 1994). I focus specifically on teachers' encouragement to attend college to determine whether this support has a different effect on girls' and boys' plans and achievements. Sewell, Hauser and Wolf (1980) found that while teacher encouragement to attend college had a positive effect on *both* women's and men's aspirations, it had no lasting effect on women's achievements. In contrast, it had a positive effect on men's educational attainment and the occupational status of their first job. It appears that when teachers give their support to young adults, men receive a boost in their achievements over that of women. This may

be true for friends' support as well. Both sources of influence deserve a more thorough investigation.

Unfortunately, most of the literature I reviewed is limited by its emphasis on short-term achievements. Given the importance our society places on educational credentials, we need to determine whether school context has a different effect on young women's and men's later educational attainment. We also need to investigate whether and how schools affect young women and men in terms of family formation and occupational attainment. Sewell, Hauser and Wolf (1980) suggest that the influence of teachers and friends has a lasting impact on men's achievements, but not on women's. Except for the impact of school socio-economic status (Mayer 1991), we do not know whether other aspects of school context affect family formation. Mayer's (1991) work is limited in another sense. It tells us nothing about the influence of school context on young men's fertility. Perhaps, as MacLeod ([1987] 1995) suggests, when schools limit the aspirations and opportunities of low-income young men, the likelihood of becoming a father increases.

In summary, some claim that single sex schooling has a positive impact on young women while others found that the advantages of single sex schooling accrued mostly to young men (Marsh 1991, 1989a 1989b). For the most part, these studies compare Catholic students and separate school sex composition into "all girls," "all boys," and "co-educational." Since the majority of American high school students are not in parochial schools and because sex composition varies, we need to re-examine the association between gender, sex composition, and attainment. Further, the influence of other school composition and school quality indicators needs to be examined with an

emphasis on how they contribute to a gendered transition to adulthood. Encouragement from peers and teachers may also have a different effect on young women's and men's outcomes. Determining whether and how school context contributes to the gendering of the transition to adulthood is an important part of my research.

Family Context

Although social scientists debate which aspects of family context promote a child's success, most agree that parents have a significant impact on children. And, parents play a central role as socialization agents in the literature on gender. Even when we compare youth from similar family backgrounds, we find that gender differences persist. But, documenting gender differences in attainment is not enough. We need to ask whether family context has a different effect on young women and men as they make the transition to adulthood. In addition, we need to determine which aspects of family context affect young women and men differently.

The theoretical literature on gender relations indicates that gender differentiation begins in childhood. Goffman (1977) and Chodorow (1978) argue that children first learn about the sexual division of labor from their experiences in the family. Brinton (1988) asserts that Japanese parents choose to invest their resources in sons because they will be in a better position to financially support their parents in old age. Last, Nava (1992) claims that families monitor adolescent girls more scrupulously in an effort to protect them. According to Nava, this is particularly true for working class girls in England.

These scholars provide us with several associations to investigate. Do parents monitor adolescent girls more closely? Are parents investing more of their resources in sons? If so, what is the influence of these parental investments on children's outcomes?

These questions reflect an emphasis on gender differences in parenting practices and the distribution of resources. My work goes a step further to determine whether "similar investments" in adolescence have a different effect on girls' and boys' achievements in early adulthood. For example, if both girls and boys receive close academic monitoring does this increase the chances that girls will go further in school, but have no effect on the amount of schooling that adolescent boys complete? This is one of the many questions I seek to answer by examining the interaction between gender and aspects of family context.

From the literature on family context, numerous aspects have been identified as important determinants of a child's attainment. They include: parental socio-economic status, parental monitoring, parental involvement in the child's school, family structure, parental encouragement, number of siblings, and residential mobility. In the remaining section, I will principally review the literature that finds gender differences and gender interactions in terms of family context and youth achievements.

To provide a frame of reference for understanding the influence of family context, I describe the relationship between parents and children in terms of investments. According to Coleman (1988), these investments take three forms: social capital, financial capital, and human capital. As I discussed earlier, social capital describes the quality of the ties between adults and children as well as their connection to others in the community. Financial capital refers to money and other assets whereas human capital refers to education, skills, and knowledge. Each form of capital becomes a resource to its "owner" to achieve some end. In other words, we can think of these as opportunities (or

constraints) under which the child must negotiate to achieve some end such as educational and occupational attainment.

One of the most extensively researched aspects of family context is that of family structure which refers to the configuration of the parents in the home. Astone and McLanahan (1991) distinguish two-parent, single-parent, stepparent, and other families. Much of the literature finds a negative association between children's achievements and single parent, stepparent and other family types. For instance, children from single parent and stepparent families receive less attention and are more likely to drop out of high school (Astone and McLanahan 1991).

And, the length of time spent in a single parent family matters. Haveman and Wolfe (1994) note that the longer a child lived in a single parent family, the less education the child completed. However, Li and Wojtkiewicz (1992) assert that additional years spent living in a single parent or stepparent family had a negative impact on the educational attainment of White youth, but not on the educational attainment of Black youth. Although these findings stress the negative impact of living in a single parent family on children's attainment, they do not distinguish the experiences of young women and men. Are girls and boys differentially affected by family structure? The findings from several studies suggest that they might be.

For example, girls from single parent families are at greater risk for early entrance into parenthood and marriage (McLanahan 1985; Trent and Crowder 1997), but this association may depend on race and the outcome examined. Specifically, McLanahan and Bumpass (1988) found that living in a single parent family increased the chances that

White and Black women would bear a child as a teen and have an out-of-wedlock birth. However, only White women from single parent families were likely to marry as teens.

The effect of family structure on young men's fertility has received far less attention. In a study of young men's fertility, Hanson, Morrison, and Ginsburg (1989) determined that residing in a single parent household had no effect on whether a young man fathered a child before age 20 net of race, family background, values, school performance, work experience, and dating behavior. In other words, when we compare young men from similar backgrounds, living with one parent does not predispose men to early fatherhood.

The relation between family structure and entrance into parenthood becomes more intricate when we include gender, race, and ethnicity. For instance, living in a stepparent household increased the likelihood of experiencing an early birth (before age 22) for all youth except Black males (Michael and Tuma 1985). And, Black females from single parent households were more likely than Hispanic and White youth and Black males to experience an early birth. Living apart from both parents increased the likelihood of early parenting for White and Black young women only.

Previous research finds no differential effect between gender, family structure, and union formation. Michael and Tuma (1985) conclude that living with a stepparent or neither parent had the same effect on White women and men: it increased the likelihood that they would marry by age 22 compared with children from intact families. Living with a single parent had no effect on marrying early for any of the youth. In sum, Michael and Tuma (1985) suggest that the association between family structure and entry into marriage is not dependent on gender.

Other studies find that family structure influences the family formation expectations of young women and men. Specifically, Trent (1994) examined the effect of family structure on expecting to experience an out-of-wedlock birth, a teen birth, and early marriage. She found that young White women living in a single parent family expected an out-of-wedlock birth, but living in a single parent family had no effect on their marital or teen birth expectations. Living with a single parent also had no impact on the expectations of Black youth or White men. In contrast, White women from stepparent families were more likely than White men to expect to bear a child out-of-wedlock. If we were to generalize these findings, we might argue that young White women's plans seem most influenced by marital disruption.

Studies of the effects of family structure and gender on educational attainment suggest that there is a negative association between young men's achievements and living in a single parent family. For example, Pirog and Magee (1997) found that young men living in single parent households were less likely to complete high school than young women. Krein and Beller (1988) indicate that the longer a young man spent living in a single parent household, the lower his educational attainment after controlling for family income. White men were particularly disadvantaged in this regard. They completed less schooling than their counterparts in two parent families.[12] The differences in educational attainment were substantial for Black men as well, but living with a single parent reduced the educational attainment of White men more. In contrast, young women's educational attainment was unaffected by the length of time spent in a single parent household.

[12] Although Krein and Beller (1988) refer to single parent families, they mean single *mother* families. Their data sets did not include a survey of single fathers.

The association between gender, family structure, and educational attainment raises several questions. Is young men's educational attainment more sensitive to living in a single parent family? What other factors might explain this association? Does this depend on race? My work will provide additional insight into these associations.

The home leaving patterns of young women and men may also differ by family structure. Hill, Yeung, and Duncan (1996) found that growing up in a mother only household or experiencing a divorce encouraged young men to leave home earlier than young men from intact, two parent families. Yet, these conditions had no effect on when young women left home. Others suggest that a marital disruption has the same effect on young women and men (Aquilino 1991). He claims that a marital disruption increased the likelihood that *both* young women and men would leave home early when compared with youth from intact families, and that growing up in a single parent family from birth was not related to the likelihood of leaving home for women and men. The contradictory findings of Hill, Yeung, and Duncan (1996) and Aquilino (1991) suggest that further study of the link between family structure, gender, and establishing an independent residence is necessary.

The social capital development literature asserts that residential mobility, which is often associated with marital disruption, leads to lower attainment in children (Coleman 1988; Furstenberg and Hughes 1995; McLanahan and Sandefur 1994). According to McLanahan and Sandefur (1994), moving after a divorce increased the chances that an adolescent would drop out of high school. It also increased the likelihood that a young woman would become a teen parent. Although this information is certainly useful, it does not tell us how women and men might be differentially affected by residential mobility.

For instance, does the repeated breaking of ties to the community (through moving) have a more detrimental effect on men's achievements? Or, does it have the same effect on young women and men? My work explores this association.

Over time, research on family context has become more sophisticated by acknowledging that marital conflict among parents may also influence a child's achievements (e.g., Musick and Bumpass 1997). However, even these studies limit their analysis to whether one or both parents are in the home. If we assert that social capital development is a function of the amount of time and attention that children receive (Coleman 1988), then we may wish to extend our investigation to the number of adults in the household rather than the number of parents. [13] I propose that the presence of additional adults would increase the social capital developed in children. In turn, this would have a positive effect on a child's achievements. Of course, we would also want to know whether this has a different impact on young women and men. Previous research noted that living in a single parent family diminished young men's achievements (Hill, Yeung and Duncan 1996; Krein and Beller 1988). Perhaps, increasing the number of adults in the household has a positive impact on young men, but no effect on young women. My work addresses this issue by systematically examining the influence of gender and the presence of additional adults (grandparents) in the household on various young adult outcomes.

That said, the number of siblings in the family might counter-balance the effect of an increase in the number of adults. Several studies indicate that additional children reduce the resources parents have available (Becker and Tomes 1976) and decrease a child's educational attainment (Haveman and Wolfe 1994; Hill and Duncan 1987).

However, research that separates the influence of number of siblings by race and gender finds that they interact to affect educational attainment, occupational attainment, and family formation (Krein and Beller 1988; Marini 1980; Michael and Tuma 1985; Sewell, Hauser and Wolf 1980). In other words, the negative effect of additional siblings is not uniform when we examine women's and men's achievements.

For example, the negative association between number of siblings and educational attainment held for Black adults as well as White men, but the number of siblings in the family did not affect White women's educational attainment (Krein and Beller 1988). Taken together with the influence of family structure, we notice that men's educational attainment appears to be more sensitive to family composition than women's attainment. White youth, Black women, and Hispanic women entered parenthood earlier as the number of siblings increased (Michael and Tuma 1985). However, the number of siblings had no effect on early entry into parenthood for Hispanic and Black men.

In contrast, an increase in the number of siblings prompted an early entrance into marriage for White and Hispanic women, but not for Black women. And, the number of siblings had no effect on the timing of men's entrance into marriage. As I mentioned earlier, it seems that White women's family formation is strongly influenced by family context and we are least able to predict Black men's family formation based on family background.

The number of siblings in a family affects adult occupational status attainment although the findings are contradictory. Marini (1980) concluded that the total, negative effect of additional siblings was greater for men at initial entry into the labor force. However, this effect changed later in women's and men's careers. As the number of

[13] I am indebted to Anita Garey for bringing this to my attention.

siblings increased, there was a drop in occupational status from first to most recent job for women *and* men. Sewell, Hauser and Wolf (1980) suggest otherwise. They noticed that as sibling size increased, the change in men's occupational status was positive, but there was no effect on the change in women's occupational status. These mixed findings warrant further investigation.

Perhaps the most extensive body of research on family context pertains to the influence of parental socio-economic status. After all, this is the foundation of status attainment research. Parents' socio-economic status refers to their occupational status, income, and educational levels. As I discussed in the previous chapter, Sewell and Hauser (1975) found a positive association between parental socio-economic status and son's aspirations and attainment.

Parental socio-economic status has been linked to large positive effects on young men's educational and occupational plans and a much smaller impact on young women's plans (Marini 1978a; Marini and Greenberger 1978). This suggests that the financial and human capital of parents has a different effect on girls' and boys' plans for the future. If we disaggregate parents' socio-economic status, we find that the components have a different effect for young women and men.

For example, much research finds a strong, positive association between the educational and occupational achievements of parents and children of the same sex and a weaker influence across sex (e.g., Sewell, Hauser and Wolf 1980; Khazzoom 1997). However, the effect of parental educational level on attainment expectations and actual family formation differs by race and gender. In particular, Hout and Morgan (1975) found that White men's and Black women's educational expectations increased with

increases in parental educational level, but parental educational level had no effect on the educational expectations of White women or Black men. Additionally, an increase in parental educational level decreased Black young women's occupational expectations, but parent's educational level had no impact on the occupational expectations of White youth or Black young men. Unfortunately, the independent influence of mother's and father's education is masked by Hout and Morgan's use of "parental educational level."

Previous research also indicates that increases in parents' educational level delayed entrance into marriage and parenthood for White youth, but the influence of parents' educational level on the timing of family formation among Black youth varied (Michael and Tuma 1985). Only an increase in mother's educational level delayed Black women's entrance into parenthood while parents' educational level had no effect on Black women's entrance into marriage or Black men's entrance into marriage or parenthood. We also find that parent's educational level had a different impact on women and men in terms of establishing an independent residence. For example, an increase in the educational level of the head of household delayed women's leaving home but had no effect on when men left home (Buck and Scott 1993). Overall, these associations suggest that parents', usually mother's, human capital has a different effect on women's and men's transition to adulthood.

When we examine the influence of financial capital on women's and men's achievements, the findings are mixed. For instance, Hill and Duncan (1987) found that mother's additional dollars of labor income had a positive impact on daughter's educational attainment but no effect on son's.[14] In contrast, father's additional dollars of

[14] Hill and Duncan (1987) distinguish the source of family income claiming that it may have a different impact on educational and income attainment. They also differentiate between first dollar and subsequent

labor income had the same positive effect on son's and daughter's educational attainment. Sewell, Hauser and Wolf (1980) conclude that pooled family income failed to differentiate women's and men's educational and occupational attainment. In other words, women and men received the same positive benefit from family income when its source is not identified. Nevertheless, Hill and Duncan's (1987) findings should give us pause. Are parents investing more money in daughters? Might this financial investment have a different impact on women's and men's plans for the future as well as their achievements? Why do some financial investments in daughters result in greater educational attainment? The patterns of association that I described above suggest that if we distinguish the components of parents' socio-economic status and identify their source (mother's or father's), they may have a different effect on the future plans, work experience, and early adult achievements of young women and men.

Parents invest in their children in other ways that may affect their achievements. These include parental monitoring, parental involvement in the child's school, and parental encouragement to attend college. Although these parenting practices may depend on a child's ability, motivation, preferences, and behavior, they usually enhance a child's outcomes. For the purposes of my study, we need to determine whether parenting practices and parental support have a different effect on young women's and men's outcomes. Current research provides little insight into the gendered nature of these relations.

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dollar. Hill and Duncan assert that "receipt of the first dollar usually conveys information about the structure or other potentially important characteristics of the household...Receipt of additional dollars of an income source conveys different information—about the total resources available to the household or, in some cases, about characteristics such as the strength of a role model or the extent of welfare dependence" (p. 44).

As I noted earlier, parental monitoring of school progress and general supervision increased the likelihood of completing high school (Astone and McLanahan 1991), enrolling in college, and participating in the labor force (Furstenberg and Hughes 1995). But, we do not know whether these investments had a different effect for girls and boys. In one of the few studies that compared parental monitoring and school involvement separately for girls and boys, Houtenville (1997) found that parents provided more support to daughters. Specifically, parents were more likely to discuss school progress and attend the school-related events of their daughters. Houtenville suggests that parents may be compensating daughters for the lack of attention they receive in school. Yet, controlling for the level of support, girls scored lower on achievement tests compared with boys. As I mentioned at the outset of this chapter, we need to expand on this and investigate whether gender and parental monitoring interact to affect attainment. Does close monitoring boost girls' achievements over boys'?

With respect to the general monitoring of a child's activities, Nava (1992) suggests that parents are more likely to know the whereabouts of their daughters as opposed to their sons. If so, what effect does it have on attainment? Astone and McLanahan (1991) concluded that greater supervision was consistently associated with positive educational outcomes regardless of family structure and socio-economic background. However, this tells us nothing about whether close supervision enhances girls' achievements over boys'. Do girls receive an added benefit from close supervision that boys do not? Or, does close supervision constrain the activities of girls and limit their achievements while having no effect on boys?

We gain some understanding of these issues by considering parents' control over a daughter's dating behavior. Hogan and Kitagawa (1985) found that when parents exerted greater control over a daughter's dating, the rate of first pregnancy dropped among Black girls net of family and neighborhood background. But, what is the effect of supervision on boys' fertility? And, does this association hold outside the Black community? We know very little about the influence of supervision on girls' and boys' outcomes. My work will add a great deal to our understanding of the relation between gender, parenting practices, socio-economic achievements, and family formation.

A final resource that affects children's achievements is parental encouragement to attend college. If a child perceives that parents encourage attending college, the child might conform to that expectation. My interest lies in whether this perceived support has a different impact on young women's and men's achievements. Previous research suggests men receive an added benefit from parental encouragement that women do not (Marini 1978b, 1980; Sewell, Hauser and Wolf 1980).

For instance, Sewell, Hauser and Wolf (1980) and Marini (1978b) found that parents' encouragement to attend college had a positive, direct impact on women's educational aspirations, but it had no impact on their educational attainment. Men, on the other hand, received a positive benefit from parental encouragement to attend college in terms of their aspirations *and* educational attainment. This differential effect suggests that women were not able to translate that support into actual achievement.

Studies of parental encouragement to attend college and occupational attainment among women and men yield contradictory findings. For example, Marini (1980) discovered that parental encouragement had a weaker effect on women's occupational

attainment than on men's occupational attainment. Yet, Sewell, Hauser and Wolf (1980) claim that parental encouragement to attend college had the opposite effect on the status of women's and men's first jobs. It was associated with a *decrease* in the status of women's first job and an *increase* in the status of men's first job. Later in one's career, parental support to attend college was positively associated with women's and men's occupational status, but the effect was greater for women.

What do we make of these varied and sometimes contradictory findings with regard to family context as a whole? First, it becomes clear that gender matters under certain circumstances. One of the most consistent findings is that living in a single parent family has a negative impact on young men's educational achievements and little effect on women's educational attainment. Krein and Beller (1988) suggest that this may depend on the length of time boys live with a single mother and the negative affect seems greater for White young men. I also conclude that White women's family formation plans and outcomes are heavily influenced by family background, but family background does not explain the family formation plans and outcomes of Black men.

In addition, I find that few studies examine the relation between gender and family context across multiple adult status indicators. Entry into marriage and parenthood are frequently studied together, and the status attainment literature links educational attainment to occupational attainment. Only Furstenberg and Hughes (1995) examine a comprehensive set of achievements: educational, occupational, and family formation outcomes. Unfortunately, they do not provide separate information on the experiences of women and men.

Finally, some of the literature I reviewed pertains to a cohort that grew up under very different circumstances from the group I study. In particular, Marini (1978b, 1980, 1984c) and Sewell, Hauser and Wolf (1980) reached their conclusions based on a cohort that graduated from high school in 1957. A more recent study of the effects of family context on young women's and men's transition to adulthood is warranted.

Individual Experiences, Plans for the Future, and Self-Esteem

Throughout the preceding sections, I suggested that social contexts shape individual experiences and plans for the future. The contribution of my work is to determine which aspects of social context have a different effect on women and men in terms of an array of experiences and social psychological factors: plans for the future, schooling and work experiences, and self-esteem. In addition, I examine whether these factors interact with gender to affect family formation, educational attainment, and occupational attainment. In this section, I pay particular attention to gender differences and interactions between these individual level factors and subsequent outcomes.

Plans for the Future

Expectations differ from aspirations. According to Kerckhoff (1976) and MacLeod ([1987] 1995), expectations represent an adolescent's assessment of that which is likely—not necessarily that which is desired. When we examine expectations of the future, the weighing of options and the consideration of constraints have already occurred. That said, we know very little about the factors an adolescent considers when making these decisions or how these factors are related.

The literature I review focuses on plans for the future as if they are independent of each other. Even the most prominent studies of educational and occupational expectations

and attainment treat them as independent (Marini 1980; Sewell and Hauser 1975; Sewell, Hauser and Wolf 1980). More recent work on family formation and educational plans also assumes that these decisions are made separately (Pimentel 1996). I argue that this an empirical question we need to ask and answer: Are family formation, educational, and occupational expectations independent? Or, do they influence each other? To what extent do they interact with gender? Sidel (1990) suggests that adolescent girls take marriage, children, work, and school responsibilities into account when planning for the future even though they do not know how they will "do it all." Do adolescent boys do the same? And, do these expectations have the same effect on women's and men's achievements?

Family formation expectations. Family formation expectations can refer to a variety of plans: whether the person expects to marry or have children, the age one expects to marry or have children, and the number of children a person expects to have. Previous research suggests that fertility expectations and the decision to enter the labor force are inter-dependent at least for women (Waite and Stolzenberg 1976). The more children women expected to have, the less likely they were to expect to be employed. Likewise, when women expected to be employed, they anticipated having fewer children. Previous research also finds that women's fertility expectations and subsequent behavior were positively associated, although this association was weak (Hendershot and Placek 1981; Pimentel 1996; Westoff 1981).

However, much less research has been done on men's fertility expectations and their behavior. The little that we do know suggests that young men who were willing to father a child out-of-wedlock were more likely to become a teen parent (Hanson, Morrison and Ginsburg 1989). When the focus is on early adulthood, assessing the

impact of young men's fertility expectations and actual behavior and comparing them with women's experiences are often difficult because men typically form families later than women (Musick and Bumpass 1997; Thornton 1991). As a case in point, Pimentel (1996) was unable to draw any conclusions about the association between men's family formation plans and behaviors because so few men had children at the time of the follow up which was two years after graduating from high school.

There are several questions we need to ask when we examine the relation between gender, fertility plans, and behaviors. Does expecting to have children cause women to fulfill that expectation with greater likelihood than men? Does expecting to delay childbearing have a positive effect on women's educational and occupational expectations and no effect on men's? If young women expect to marry and raise a family, they may have lower educational expectations although the same family formation expectations may have no effect on the educational plans of young men. This may reflect underlying assumptions about the household division of labor.

Since we know that most women marry earlier than men, we may also anticipate that young women expect to marry earlier than young men. Pimentel (1996) not only confirms this trend, but she notes that expecting to marry later delayed women's cohabitation and marriage, but this expectation has no effect on whether men cohabited or married as young adults. This study provides preliminary insight into the gendered nature of the transition to union formation. However, we need to examine union formation activities beyond age 20.

Educational expectations. In earlier sections of this chapter, I suggested that educational plans are shaped by labor market conditions, family context, and school context. Here, I

discuss the impact of these expectations on women's and men's achievements. Its influence is not consistent. Planning to attend college led to greater returns to men in terms of occupational status, but it had a stronger effect on women's educational attainment (Sewell, Hauser and Wolf 1980). Pimentel (1996) found that educational plans had a positive effect on young women's educational attainment and no effect on young men's. Before we conclude that women are better at converting their plans into achievements, Marini (1978b) argues that when both women and men planned to attend college, it was men who were more likely to do so.

Marini (1978b) also discovered that planning to attend college did not delay marriage for women or men. Since she did not examine the impact of family formation expectations, we do not know the relation between educational expectations, family formation expectations, and attainment. However, we could interpret her use of dating behavior as a proxy for intentions to marry. Marini (1978b) concluded that dating lowered women's educational expectations, but had no effect on men's. Dating also lowered the age at first marriage for both women and men. These patterns prompt the following questions: Are women with high educational expectations more apt to achieve them compared with men? How do educational expectations influence the family formation expectations of women and men? Do educational expectations have a greater impact on women's family formation plans as opposed to men's?

Considerable research has been done to determine whether there is a link between girls' educational expectations and experiencing a teen birth (Abrahamse, Morrison, and Waite 1988; Moore, Simms, and Betsey 1986; Plotnick 1992; Sugland, Wilder, and Chandra 1996). These studies conclude that girls with high educational expectations are

less likely to experience a premarital pregnancy and more likely to terminate their pregnancy if they become pregnant. This is consistent with work I mentioned earlier claiming that youth who perceive that schooling and work opportunities are available postpone early childbearing. Yet, we find that the relationship between young men's educational expectations and fertility behavior is often overlooked. My work seeks to rectify this by systematically comparing their experiences to young women's.

Occupational expectations. Previous research demonstrates that occupational expectations have a positive impact on women's and men's educational and occupational attainment (Marini 1980; Sewell, Hauser and Wolf 1980). The higher the status of the job expected, the more education the person completed and the greater the status of the resulting job. Yet, both studies conclude that the impact of occupational expectations is smaller for women. This suggests that even when women expect to work in high status occupations, they are not as likely as men to obtain them. Occupational expectations also had no impact on when a woman married according to Marini (1984c). In other words, expecting to hold a high status job did not cause women to delay marriage.

But, *planning* to work reduced family formation expectations and delayed women's entry into marriage (Goldscheider and Waite 1986; Waite and Stolzenberg 1976). Again, we know very little about whether and how occupational status expectations affect men's family formation expectations and behavior. My work provides a thorough comparison of women's and men's experiences to determine whether plans for the future and gender interact to affect attainment. As I conclude this section, what is most striking is the need to consider plans for the future as simultaneous decisions and to

systematically investigate their influence on women's and men's outcomes. My work fills this gap in the literature.

Schooling Experiences

I distinguish schooling experiences from school quality and composition because these factors are clearly aspects of the educational process over which the student has some control. This includes curriculum track, courses completed, and academic achievement. The literature on academic achievement suggests that high school aged girls tend to score lower on math and science tests than boys (Gamoran and Mare 1989; Marsh 1989a; Pong 1997 is an exception; Vanfossen, Jones, and Spade 1987). This pattern holds even when girls have taken the same number of courses as boys (Vanfossen, Jones and Spade 1987). Rather than investigate who does better on which test, I argue that our attention needs to be focused on who receives a greater return on those scores. If adolescent girls and boys score similarly, does one group complete more schooling as a result?

Several studies suggest that students in the college bound track had higher educational and occupational expectations, higher self-esteem scores, completed more academic courses, performed better on achievement tests, and were more likely to enroll in college than students in the general or vocational tracks (Marsh 1989a; Vanfossen, Jones and Spade 1987). Yet, Gamoran and Mare (1989) claim that women and Blacks were more likely to be placed in this track when compared with men and Whites of the same background. This had a compensatory effect on their achievement. Specifically, girls' greater assignment to the college track reduced the gender difference in math achievement. Had more boys been assigned to that track, the gender differences in math

would be more pronounced. Tracking advantages that accrued to girls also accounted for their greater graduation rates. They found this to be true for Blacks as well. I am more interested in the long-term effects of track placement and achievement as they interact with gender. Does the benefit that women accrue from the academic track wear off with time?

The AAUW (1992) raised a concern over gender differences in course work claiming that girls take fewer advanced math and science courses. They assert that this may have a negative effect on girls' occupational attainment by foreclosing opportunities for good paying jobs that require strong math skills. I would like to raise the same concern, but pose the question differently. Does completing advanced math (and science) courses boost men's achievement over women's? Or, do women and men benefit equally from advanced courses in high school?

Overall, the patterns of association that I review pertain to short term achievements. What happens to women and men over the long term? For instance, does completing advanced math course work have a greater effect on the status of men's jobs compared with women's? More generally, do men accrue an additional benefit from their schooling experiences that women do not? A systematic investigation of the effects of schooling on women's and men's educational and occupational attainment as well as family formation is needed.

Work Experience

Social scientists and educators debate the utility of work experience during adolescence. Some claim that work is beneficial for youth because it teaches positive work habits like responsibility and time management while giving youth an opportunity

to explore various careers (National Commission on Youth 1980). Others argue that early work experience induces a "precocious maturity" by promoting adult consumptive behaviors such as drinking, drug use, and smoking as well as frivolous spending (Greenberger and Steinberg 1986). If there are benefits to early work experience, are they different for women and men?

The literature on work experience suggests that women and men acquire different benefits. Although employed adolescent girls tended to complete more schooling, work experience seemed to have a negative impact on young men's schooling and a positive impact on their later wages (Carr, Wright, and Brody 1996; Mortimer and Finch 1986; Mortimer and Johnson 1996). However, Mortimer and Johnson (1996) found little evidence that working during high school prompted early entrance into adult family roles.

In addition, work experience differentiated the family formation expectations of White and Black youth (Trent 1994). For example, Whites who worked more than twenty hours a week expected to marry early and were less likely to expect an out-of-wedlock birth. This had no effect on Blacks' marital and childbearing plans. We do not know whether high school work experience has a different effect on women's and men's plans. If early work experience encourages men to "settle down" while giving women the freedom to pursue other interests, high intensity work may have a positive effect on young men's family formation plans (an increased expectation to marry and have children) while having the opposite effect on women's plans.

Self-Esteem

In 1991, the American Association of University Women released its findings from a survey of American girls and boys in grades four through ten. Their most startling

discovery was that girls' self-esteem dropped significantly as they made the transition from elementary to high school whereas boys' self-esteem did not drop as much (AAUW 1991). This is not the first time that gender differences in self-esteem have been documented (see Elliott 1988; Richman, Clark, and Brown 1985; Rosenberg 1989; Simmons and Rosenberg 1975). The most prominent of these studies, Rosenberg ([1965] 1989) found that gender interacted with other social categories (race, socio-economic class, religion, and national origin) to influence self-esteem. Rosenberg and Simmons (1975) also discovered gender differences in the self-esteem of girls and boys across three age groups, but the differences were not statistically significant. Studies of self-esteem in later adolescence suggest that the pattern detected by the AAUW does not continue (Tashakkori and Thompson 1991). In particular, they concluded that girls' self-esteem was consistently higher than boys' and Blacks had higher self-esteem than Whites.

Although documenting gender differences in self-esteem is important, we need to know whether there is a connection between differences in self-esteem and later achievements. If girls have lower educational and occupational attainment because they have lower self-esteem than boys, this is important. But, this does not tell us whether low self-esteem has a more detrimental impact on girls relative to boys. If low self-esteem among girls and boys results in lower achievements for girls *only*, this is cause for concern. Unfortunately, studies that examine this type of association are few and far between.

Before reviewing the literature that links self-esteem to early adult outcomes, we need to define self-esteem. Self-esteem represents a positive or negative orientation

toward the self as object (Rosenberg 1979, p. 54). Self-esteem implies that individuals vary in their self-respect and belief in their personal worth. Self-esteem is also differentiated by the frame of reference. For instance, global self-esteem is not tied to a particular experience, but refers to how a person feels about her or himself in general. More specific types of self-esteem such as academic self-concept focus on the person's evaluation of one's abilities in particular subjects and feelings about those subjects (Marsh 1989a; Marsh, Byrne, and Shavelson 1988).

Research suggests that school achievement and work experience had a positive effect on self-esteem (Owens 1994; Spenner and Otto 1985). High self-esteem was also associated with shorter periods of unemployment for women and shorter periods of part-time work for men (Spenner and Otto 1985). Doing well in school also increased young men's self-esteem (Owens 1994; Rosenberg, Schooler, and Schoenbach 1989) although Covington (1989) argues that the positive relationship between self-esteem and academic achievement is weak. Clearly, individual experiences influence self-esteem and self-esteem has an effect on short-term outcomes. The questions that I seek to answer are: Does social context have a different effect on adolescent girls' and boys' self-esteem? Does self-esteem have a different effect on women's and men's socio-economic achievements?

The link between family formation and self-esteem has received greater attention in the literature although most of the focus has been on adolescent sexual activity. Specifically, some have argued that low self-esteem propels youth into early sexual activity and early childbearing (see Crockenberg and Soby 1989 for a review of the literature). According to Crockenberg and Soby (1989), the findings are mixed. A more

consistent relationship exists between self-esteem, contraception, and pregnancy resolution. Youth with high self-esteem were more likely to contracept (Crockenberg and Soby 1989). And, young women with high self-esteem were more likely to have an abortion (Plotnick 1992). However, Plotnick did not find that girls with high self-esteem were less likely to get pregnant. Most of this research pertains to girls. We know very little about self-esteem and boys' sexual activities. We know even less about whether the effect of self-esteem on family formation depends on gender. Perhaps young women with high self-esteem are more likely to delay parenting compared with young men with high self-esteem. My point is that most studies of the determinants of fertility expectations and behaviors neglect boys' experiences.

At the very beginning of this section, I noted that social contexts influence individual experiences, self-esteem, and plans for the future. Some of these individual level factors may influence each other and ultimately impact adult status outcomes. My review also suggests that the experiences of adolescent girls and boys are different when we consider schooling and work. As a whole, my research fills a number of gaps in the literature by systematically and consistently examining the extent to which gender interacts with social context and individual level factors to affect educational attainment, occupational attainment, and family formation.

The Reciprocal Influence of Family Formation, Educational Attainment, and Occupational Attainment

In this final section, I assert that the adult status outcomes of residential independence, union formation, parenthood, educational attainment, and occupational attainment may be inter-dependent. Status attainment research gives us a preliminary

look at this possibility. From this body of literature we notice that educational attainment had a different effect on women's and men's occupational status. Specifically, Sewell, Hauser and Wolf (1980) found that educational attainment mattered at the beginning of men's careers and later in women's. Also, the effect of women's education was mediated by marital and parental status. For instance, the amount of education a never married woman completed had a smaller impact on the status of her most recent job, but the amount of education a woman with three or more children completed had a large effect on her occupational status. Sewell, Hauser, and Wolf (1980) argue that education matters less for people with continuous work histories. In spite of this obvious contribution, Sewell, Hauser, and Wolf (1980) are missing an important piece: the effect of family formation on *men's* educational and occupational attainment. For that, we need to consider Marini's (1978b) work.

According to Marini (1978b), additional schooling delayed marriage for women *and* men. And, the earlier a woman married, the less education she completed. Yet, age at first marriage had no effect on men's educational attainment. It appears that educational attainment delays marriage for women and men, but marrying early had a more deleterious impact on the amount of education women complete.

Marital status and the number of children also had a different effect on women's and men's occupational status (Marini 1980). Being married had a negative effect on the occupational status of ever employed women and a positive effect on the status of men's most recent job. In addition, Marini (1980) concluded that the number of children born between first and most recent job had no impact on men's occupational status, but a

negative effect on the status of women's jobs. Again, it appears that marriage and family had a negative impact on women's achievements when compared with men's.

The relationship between educational attainment and age at first birth is less clear. Although Rindfuss and John (1983) claimed that educational attainment delayed childbearing among women, they found that childbearing had no effect on educational attainment. Marini (1984c) and Klepinger, Lundberg, and Plotnick (1995) argue to the contrary. They concluded that delayed childbearing increased women's educational level. Linking the effects of marriage and parenthood, women appear to benefit from delaying both activities whereas the impact on men's achievements is less obvious.

Pirog and Magee (1997) suggest that early parenthood among men may be as detrimental to their educational attainment as it is to women. Specifically, they find a negative association between being a teen parent and completing high school. How does early parenthood affect men's educational attainment over the long-term? And, does educational attainment affect men's entrance into parenthood? These relationships need to be explored.

A final aspect of family formation, achieving residential independence from one's family of origin, is also related to gender, marriage, parenthood, and educational attainment. Goldscheider and DaVanzo (1985) determined that men were more likely to live at home than women were. They attributed this to women's earlier entrance into marriage, which had the strongest effect on achieving residential independence. However, women who became parents at an early age were more likely to be living with their parents. This was not true for young men. Possibly, young women returned home for support whereas a young man who became a parent was encouraged to leave and take

up residence with his girlfriend. Based on this study, I conclude that marriage and early parenthood affect women's and men's residential independence differently.

The impact of occupational attainment and education on residing independent of one's family is the subject of less research. Instead, we have to rely on employment status and school enrollment to inform us. For example, Goldscheider and DaVanzo (1985) note that full time, unmarried female students who worked were less likely to live at home than their male counterparts. They suggest that these young women were not only working their way through school, but also working their way out of the house. We may find that occupational status and educational attainment have a positive effect on residential independence for both women and men once they have completed school. We may also find that residential *dependence* enables young women (or men) to increase their educational attainment because they are able to redistribute their income and pay for college. Whether this association would be different for women and men remains to be investigated.

Finally, occupational attainment may influence educational attainment. When unemployment is high or companies downsize, adults more readily return to school to upgrade their skills. For example, many of the manufacturing jobs that were lost in the 1980s and 1990s were lower status positions occupied by men. If these workers took advantage of retraining opportunities, then we might find an association between occupational status and the amount of schooling workers complete. Other occupations, like teaching, provide financial incentives to incumbents when they acquire additional education. I opt to examine the effect of occupational attainment on educational attainment in a later study.

Summary

In this chapter, I reviewed three social contexts that may have a different impact on young women and men as they become adults: labor market conditions, school context, and family context. I also suggested that individual experiences, self-esteem, and plans for the future mediate the influence of context. Put differently, social context exerts its influence by affecting individual thinking and experiences. In turn, these affect socio-economic achievements and family formation.

At this point, the importance of social context appears obvious; however, it may not be clear why I have chosen the particular aspects of social context. The literature on school, family, and labor market contexts provides a host of factors that affect adolescent and adult status outcomes. In selecting factors that might influence women's and men's experiences differently, I narrowed the list by choosing determinants that have been treated as gender-neutral sources of influence such as unemployment rates, social capital, parental monitoring, and school quality. These are important factors that predict "success" in early adulthood, but we do not know if they make a different contribution to the achievements of young women and men. If gender inheres in our social institutions and provides a basis for differential treatment, then these aspects of social context also need to undergo scrutiny to determine whether and how they affect women and men differently.

The literature has already demonstrated that a number of factors differentially affect young women and men: family socio-economic status, family composition, and school type. I include them to provide a basis for comparison with other gender studies. Concerns raised by the American Association of University Women (1992) prompted me

to include teacher encouragement, self-esteem, and math/science course work as determinants of young adult achievements. Based on their concerns, we need to ask whether these factors have different effect on young women and men in terms of educational and occupational attainment. Last, the data set I use constrained the factors I was able to choose. Undoubtedly, there are other aspects of context that could have been included in this study. However, my work serves as a starting point for our analysis of whether and how gender matters throughout the transition to adulthood.

CHAPTER 3

THE HIGH SCHOOL AND BEYOND SOPHOMORE COHORT OF 1980: THE SELECTION OF A SAMPLE AND THE HISTORICAL CONTEXT

To examine the influence of schools, families, and the labor market on the transition to adulthood, I require data that provide contextual as well as individual level information. Because I also argue that young women's and men's experiences, plans for the future, and self-esteem are shaped by the social context and influence their adult status outcomes, I need longitudinal data that include social psychological factors. The High School and Beyond study is well suited to answer my research questions because it is a nationally representative sample of American high school students, provides contextual and individual level data, and follows the same youth for a period of twelve years.

In the remainder of the chapter, I describe how the sample was selected. I also place the cohort in historical context by characterizing social trends and major events in American society from the middle 1960s when this cohort was born to the early 1990s when the study ended.

The High School and Beyond, 1980 Sophomore Cohort Study

In 1980, the National Center for Education Statistics of the U.S. Department of Education began a longitudinal study of American high school students named the High School and Beyond. As the subcontractor, the National Opinion Research Center

(NORC) was responsible for data collection. The study started with a nationally representative sample of high school students who were seniors and sophomores during 1980.

The sample was obtained using a two stage, stratified random probability sample selecting schools first then randomly selecting 36 students from each grade. Schools within the stratum were selected with a probability proportional to their size. However, several types of schools were oversampled and represent "special" strata. These included: public schools with a high percentage of Cubans, public schools with a high percentage of other Hispanics, Catholic schools with a high percentage of Blacks, Catholic schools with a high percentage of Cubans, alternative public high schools, private schools with a high proportion of National Merit Scholarship finalists, and other non-Catholic private schools which were stratified by the four Census regions (see Frankel, Kohnke, Buonanno, and Tourangeau 1981 for more information; Zahs, Pedlow, Morrissey, Marnell, and Nichols 1995, p. 16).[15]

The remaining school strata included regular Catholic schools stratified by four Census regions and regular public schools stratified by nine Census regions, urbanicity, and racial composition. The final sample consisted of 1,222 possible schools. Of these, 1,015 cooperated and permitted 36 sophomores (and 36 seniors) to be randomly selected for participation in the study. In addition to collecting data on students, the NORC collected extensive information on the school context. Administrators from 997 schools returned school surveys. The NORC also provided state, county, and standard metropolitan statistical area (SMSA) information on select labor market indicators for

[15] The NCES defined schools with a high percentage of minorities as those with student bodies consisting of thirty percent or more of the indicated racial-ethnic group.

1980, 1981, and 1982 based on the school's location. This information came from the Bureau of Labor Statistics and the Bureau of Economic Analysis.

By 1982, forty schools from the original sample either closed, merged, or did not have sophomore respondents. This reduced the school sample to 975 base year schools and 17 "target schools." Target schools refer to institutions that received students en masse from a base year school. Data are available on these schools. However, they are not part of the original probability sample.

With respect to the student sample, the 1980 sophomore cohort originally consisted of 35,723 students. By the first follow-up in 1982, some students were no longer enrolled in their original schools because they graduated early, dropped out, or transferred to another school. This group of students was subsampled and represents 4,587 youth (1,290 transfers, 696 early graduates, and 2,601 dropouts). In 1982, a subsample of 18,500 from the original group of students was randomly selected for a high school transcript study. This group retained its overrepresentation of minorities, students who left school early, and students in private high schools (Zahs et al. 1995).

From the subsample of 18,500 students, 14,825 were selected to participate in the 1984 follow-up. This probability sample was retained for the 1986 and 1992 waves as well. The final sophomore cohort sample is comprised of 11,012 students who were enrolled in school during 1982, 2,584 dropouts, 753 transfer students, and 476 early graduates. As of the 1992 survey, 85.3% of the 14,825 students had been retained. My research focuses on the experiences of the subsample of sophomores who participated in all five waves of the study.

Historical Context

Another contribution of my work is to provide an analysis of the transition to adulthood for a contemporary cohort of American youth. Many of the foundational studies of the transition to adulthood pertain to a cohort that graduated from high school during late 1950s (Marini 1978b, 1980, 1984a, 1984c; Sewell and Hauser 1975; Sewell, Hauser, and Wolf 1980). A number of historical events have occurred since that group came of age. My summary of the social trends and policies from the 1960s to the 1990s suggests that these events created a different set of opportunities and constraints for the women and men of the cohort I study. In the remaining section, I describe the social policies and trends that shaped the lives of the young adults who participated in the High School and Beyond study.

The majority of the cohort in this study was born in 1964. Thus, their early childhood experiences occurred in a period of social upheaval. The Civil Rights Movement, the Women's Movement, and the War on Poverty came to fruition during the 1960s and early 1970s. These movements stimulated a number of social policies and programs that would shape the lives of these youth and their parents. In spite of this, the economic recession of the 1970s and the era of political conservatism that swept the 1980s and early 1990s diminished some of the advances made by the aforementioned social movements.

In 1961, President Kennedy appointed a committee to study the status of women. Within two years, the U.S. Congress passed legislation guaranteeing equal pay for equal work (the Equal Pay Act). In 1964, Congress passed the Civil Rights Act. Title VII of this Act prohibited discrimination on the basis of race, color, religion, sex, or national

origin in hiring, promotion, and other conditions of employment (Goldin 1990).[16] Following the passage of this bill, the Equal Employment Opportunity Commission was created to enforce Title VII and investigate claims of job discrimination.

The passage of the Economic Opportunity Act in the same year resulted in a number of initiatives designed to help the poor including Head Start, community action programs, VISTA, and Job Corps. One year later, Medicaid funding was approved and provided health care coverage for economically disadvantaged individuals. By 1966, the National Organization of Women formed to pressure the Equal Employment Opportunity Commission to investigate claims of sex discrimination in the work place (Harrison 1988 in Goldin 1990).

By the time members of this cohort were in elementary school, the U.S. Congress passed Title IX of the Education Amendments of 1972 prohibiting sex bias in athletics, career counseling, medical services, financial aid, admissions practices, and the treatment of students (Sadker and Sadker 1994). The Equal Employment Opportunity Act, forbidding discrimination on the basis of sex or marital status, also passed in 1972. Additional executive orders expanded the anti-discrimination laws to cover federal employees and contractors doing business with the federal government. The sheer number of legislative acts that "guaranteed" greater access to educational and employment opportunities for women and minorities is impressive.

These pro-social policies occurred during a period of economic growth that spanned the late 1940s to 1973. During this time, family incomes rose, housing was affordable for most families, worker productivity grew, consumption increased, and the

[16]The inclusion of "sex" in the Civil Rights Act was done to ensure that the bill would be defeated (Goldin 1990). Fortunately, this was not the case.

government increased spending on social programs (Levy 1987). After 1963, the United States labor force achieved near full employment until 1970. However, increases in the price of oil from 1973 to 1974 and again from 1979 to 1980, decreased the purchasing power of American consumers. A food shortage from 1972-1973 drove food prices up. After 1973, worker productivity stopped growing (Levy 1987). Suddenly, most families could no longer look forward to fulfilling "the American dream."

In the eight years following Richard Nixon's first term, the average family's real income dropped by seven percent. During Ronald Reagan's first four years in office (1980-1984), it grew by only five percent (Levy 1987, p. 4). During this period of economic stagnation, the competition among baby boomers for jobs and an increase in the percent of female headed households made achieving economic security impossible for many families. Aid to Families with Dependent Children, administered by states, did not keep pace with inflation whereas Social Security and Medicare, programs targeted for the elderly, did. Further, the cost of financing a home increased dramatically relative to the head of household's income. Because fewer children were born during the 1970s, per capita income increased, but income per worker decreased. As a result, family income inequality continued to rise from 1973 to 1984 (Levy 1987).

The 1980s also included periods of high unemployment reaching a peak of 9.7% nationwide in 1982 (Farley 1996, p. 81). In 1985, women's unemployment reached an all time high of 7.4% compared with men's 7.0% while Black unemployment was more than double that of Whites' 15.1% to 6.2%, respectively (U. S. Bureau of the Census 1996, p. 394). Although additional social policies designed to protect women and minorities were initiated during the 1980s, enforcement of anti-discrimination and affirmative action

regulations was virtually brought to a standstill during the Reagan and Bush administrations (Reskin and Padavic 1994).

To this point, it becomes clear that the High School and Beyond cohort grew up in a period when many families had trouble making ends meet and these young adults could no longer be guaranteed achieving the symbols of economic stability: a house and a "permanent," good paying job. In addition to the economic problems of the 1970s and 1980s, there are several other trends in women's and men's experiences that set this cohort apart from the cohort I mentioned earlier.

First, we notice that women's labor force participation grew steadily from 1947 to 1990 (Moen 1992). Bianchi (1995) argues that we can attribute the increase in women's labor force participation to delayed marriage and parenthood, increases in educational attainment, and smaller families. Although this is certainly the case, we also note that over time, more women began combining the roles of market laborer and mother.[17] For example, Moen (1992) claims that women born in the 1930s typically left work in their late 20s with half of them returning to work by their late 30s and early 40s. When we contrast the labor force participation rates of mothers with dependent children under 18, 18% of mothers in 1950 compared with 63% of mothers in 1990 were in the labor force (Moen 1992). Moreover, the proportion of married women with infants and toddlers in the labor force has increased. As of 1990, just over half of mothers with infants under 12 months were in the labor force while 60% of mothers of two year olds were (Moen 1992). Although women's labor force participation has risen steadily, men's labor force

[17] This has almost always been the case for Black women and White, working class women. It became "remarkable" when White, middle class and mothers of children under age six moved into the labor force.

participation has remained relatively constant (Bianchi 1995). In their peak years (ages 35-54), about 70% of men are employed full-time.

The increase in women's labor force participation reflects a change in values as well. From 1977 to 1994, fewer Americans agreed that a preschool child suffers when her or his mother works, and fewer Americans agreed that a woman should support her husband's career rather than having one of her own (Farley 1996, p. 46-47). A change in values and an increase in protective legislation may have contributed to the increase in women's paid employment, but the decrease in men's wages over time has also forced families to rely on women's income to survive (Farley 1996).

In addition to changes in women's labor force participation rates, women's and men's educational attainment has increased over time. In 1960, 5.8% of women had completed four or more years of college compared with 9.7% of men. By 1990, this had increased to 18.4% for women and 24.4% for men (U. S. Bureau of the Census 1996, p. 159). Women's high school graduation rates have exceeded men's since the 1951 birth cohort (Mare 1995). Until the cohort born in the early 1960s, men were more likely than women to complete at least a Bachelor's degree. That trend reversed with the 1960 birth cohort. Although the number of advanced degrees earned by women and men rose from 1950 to 1990, men earned a greater proportion of MBAs, LL.Bs, M.Ds, and M.Engs. Women continue to earn a greater proportion of the M.Ed. degrees (Mare 1995, p. 168). Overall, the labor force participation rates and educational achievements of women have increased steadily since Sewell and Hauser's and Marini's studies.

According to Bianchi (1995), women's employment in White-collar occupations increased from 1970 to 1990. However, we continue to find women in a narrow band of

occupational categories. These include clerical work, private household occupations, and other service industry jobs (Reskin and Padavic 1994, p. 53). The decline in manufacturing jobs from the 1940s to present has had an adverse affect on men's employment since they were overwhelmingly employed in goods production (Levy 1987). Although some men have moved into service sector and White collar employment, women benefited more so when service sector jobs expanded (Farley 1996). Nevertheless, the similarity in occupational classifications for women and men is greater among the more recent cohorts (Bianchi 1995).

At the time that the High School and Beyond (HSB) cohort would begin experimenting sexually, they would have advantages that earlier cohorts did not. Oral contraceptives had been commercially available since 1961 and abortion had been legal since 1973. Attitudes toward premarital sex had become more accepting as well (Hill and Yeung 1997). And, the American Psychiatric Association's declassification of homosexuality as a mental disorder in 1973 reflected a shift in American opinion regarding the "cause" of homosexuality. These events provide the HSB cohort with greater freedom to explore their sexuality and more effectively control their fertility in comparison to earlier cohorts.

In fact, we find that women's fertility rates have declined since 1955 (Moen 1992). Moen also concluded that more recent cohorts of women have delayed entrance into parenthood. In the 1950s, a larger proportion of women began families in their 20s. By the 1970s and 1980s, most women delayed childbearing until their 30s (Moen 1992). This younger cohort is also more apt to experience prolonged singleness. According to Moen (1992), during the 1950s, the average age at first marriage was 20.3 years for

women and 22.8 years for men. In contrast, the average age at first marriage by 1989 was 23.8 years for women and 26.2 years for men.

The increase in divorce rates from the late 1950s to the mid-1990s and the spread of "no fault" divorce legislation have also made divorce more acceptable (Farley 1996). We find another change in family formation. Since the 1960s, cohabitation has become increasingly popular among couples. In 1960, cohabiting couples as a percentage of all couples (married and cohabiting) were 1.1%. By 1993, the percentage increased to 6.2% (Farley 1996, p. 112). There is no indication that the trend will reverse any time soon. Based on these trends in family formation and dissolution, we would expect that the High School and Beyond cohort would be more likely to cohabit, and would marry and have children later. They would also be more likely to experience a divorce when compared with earlier cohorts.

The growing number of births to unmarried women of all ages from 1970 to 1990 (U.S. Bureau of the Census 1995) suggests another trend: the decoupling of marriage and parenthood. According to Rindfuss (1991), this is particularly true for White women. Perhaps this indicates that American youth are separating decisions about marriage from decisions about parenthood (Rindfuss 1991). This remains to be explored in my work.

From the 1960s to the early 1990s, the United States made great strides in terms of providing "equal opportunities" to women and minorities in spite of the poor economic conditions and political conservatism that characterized the 1970s and 1980s. As a result, we might expect that educational and occupational attainment differences between women and men would be small by the time this cohort was surveyed in 1992. However,

gender differences in family formation continue. Women marry and have children earlier than men. I expect that this trend will be evident in my work as well.

Although documenting gender differences is important, my research goes beyond this to ask how aspects of social context affect women and men differently. First, we need to determine whether women and men start with the same resources, then we need to investigate whether they accrue different benefits when "treated equally." Amidst national, legislative successes that opened the doors of opportunity to women and minorities, my work investigates how local contexts such as schools, family, and the labor market provide benefits to men and not women (or vice versa) as they make the transition to adulthood. Hence, my work reveals how the transition to adulthood is gendered for Americans growing up in the late twentieth century.

CHAPTER 4

METHODOLOGY

Prior to conducting my analysis, it was necessary to make several adjustments to the full sample. Below, I describe those changes. Cluster samples, like the High School and Beyond study, violate the assumptions on which traditional statistical analyses are based. I review the estimation challenges that cluster samples pose. Then, I discuss other estimation issues that complicate the analysis: endogeneity, reciprocity, and limited dependent variables. I describe my strategy for dealing with these complexities as well. In the third section, I discuss the operationalization of my concepts. A complete list of the concepts, their equivalent variable names, and recoding details, is presented in the Appendix. In the final section, I examine and interpret the bivariate associations between gender and the various contextual and individual level factors.

Data Adjustments

The High School and Beyond Sophomore Cohort Study provides detailed information on school context, labor market conditions, family context, and individual outcomes. To explore the research questions I raised in earlier chapters, I made several adjustments to the data that reduced the original sample size. The sample that participated in the study from 1980 to 1992 originally comprised 14,825 students.[18] Because my work

[18]The 1992 data from the High School and Beyond study are part of the restricted use data and must be obtained directly from the National Center for Education Statistics. The Post-Secondary Education

requires information from the 1980, 1982, and 1992 surveys, I deleted 4,295 students who failed to participate in all five waves. This is a more restrictive subset than I need. However, I chose to do this so that I would be able to use the panel, probability weights that were included in the study. This reduced the sample to 10,530 students. The difference between the number of students who participated in the three waves that I use and the number who participated in all five waves is 912 students. Across each of the waves, women were more likely to participate.

Next, I eliminated 944 students who transferred from their original school. This was necessary to ensure that the influence of school context remained constant. This left 9,586 students who continued to affiliate with the same high school until they either graduated or dropped out of school. In this case, women were more likely to be excluded since they were the greater proportion of transfer students. The last adjustment I made was to delete 1,917 students who either did not report their race/ethnicity or identified as Hispanic, Native American, or Asian American.[19] When the remaining 7,669 individuals are weighted to adjust for participation in all five waves and sample non-response, 51% are women, 49% are men, 85% percent are White, and 15% are Black.

Transcript Study revised data contained the primary sampling unit and stratification variables. These are also restricted use data.

[19] Hispanics were the largest of these subgroups (n = 1,421) and potentially could have served as a third comparison group. However, Velez (1989) argues that the diversity among Hispanics is so great that they should be analyzed as distinct groups. Wojtkiewicz and Donato (1995) find that respondent's and parents' place of birth as well as length of residence in the United States distinguish Hispanic achievements. Based on these findings, I decided to drop Hispanics from my analysis and prefer to examine their transitions to adulthood in a future paper. Asian American (n = 281) and Native American (n = 201) subgroups were too small to perform additional subgroup analysis.

Multi-Stage Cluster Sampling and Sample Weights

Although we are often warned about the increase in sampling error when we use multi-stage cluster samples for our studies, few researchers pay much attention.[20] Instead, we frequently use statistical tests that are based on simple random sampling with replacement and fail to address the fact that observations from the same cluster are not independent. Although chosen randomly, students from the same school (cluster) share certain characteristics that make them more alike than students from different schools. Two-stage cluster sampling, the technique used to generate the High School and Beyond sample, creates at least two sampling errors: one at the school level and one at the student level. Rather than reducing the sampling error, this increases it because we run a greater risk of selecting a sample that is not representative of the cluster (school) or elements (students) when the sample size at each stage is smaller than the total sample size (Babbie 1995, p. 215-217).

When traditional statistical tests are used, they assume that the students were selected using simple random sampling techniques and fail to account for this "inflated" sampling error. The result is a smaller sampling error (standard error) and an increase in Type I error; the probability of claiming that there is an effect when there is not. These traditional statistical techniques, when used with cluster samples, lead to a serious underestimation of the parameter variances. Cluster sampling tends to reduce the efficiency of ordinary least squares methods for obtaining estimates of the population parameters; however, in large samples, the loss of efficiency is not as troublesome as the

[20] Very few large scale studies provide the kind of information we need to adjust for the design effects. At a minimum, researchers need information on the strata and primary sampling units. If segments of the sample were chosen disproportionate to their representation in the population, then we also need sampling weights. Even with this wealth of information, few statistical programs can make these adjustments. For more

influence of distorted parameter variances on significance tests and confidence intervals (Scott and Holt 1982).

Unfortunately, this is not the only complication. Cluster samples are usually stratified. This means that some of the units at the first stage, schools in this case, are chosen because they represent groups of special interest and are selected in greater proportion than their actual representation in the population. For instance, the High School and Beyond study stratified schools by type, size, region, and racial composition. Schools in certain strata were over-sampled. Thus, students from the over-sampled schools are over-represented in the sample relative to their size and representation in the population. Stratification typically reduces the sampling error, but we cannot assume that its combination with clustering effects adjusts the sampling error to "normal levels" (Scribney 1998).

If we are interested in generalizing our findings to the population as a whole, then we need a way to compensate for the unequal probability of selection. Further, students drop out of studies especially when they go on for years. To maintain an adequate representation of the population, we also need to adjust for failure to participate in each of the waves. Sampling weights serve this purpose. They are constructed as the inverse of the probability of being selected. In the case of the High School and Beyond study, there are two probabilities to consider: the selection of the school and the selection of the student within the school. Then, we need to take into account non-response at both levels and across each of the waves (for a technical discussion of the creation of sampling weights see Frankel, Kohnke, Buonanno and Tourangeau 1981; Zahs et al. 1995).

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information on statistical packages that incorporate design effects in the estimation of the population parameters and their variances see Carlson (1998) and Lepkowski and Bowles (1996).

Basically, sampling weights reduce the influence of students who had a high chance of participating in the study and increase the influence of students who had a lesser chance of participating so that they reflect the associations we would expect to find in the population.[21] Many other studies that use the High School and Beyond cohorts incorporate sampling weights (Gamoran and Mare 1989; Hanson, Morrison and Ginsburg 1989; Koball 1998; Marsh 1989a, 1991). I have chosen to do the same.[22]

In addition to using sampling weights, the issue of sampling design needs to be addressed as it relates to my work. Certainly, the effects of stratification and clustering need to be taken into account when the information is available and when estimating a single equation model. There are two schools of thought regarding how this should be handled (Carlson 1998; Hansen, Madow, and Tepping 1983 and ensuing discussion; Lee, Forthofer, and Lorimor 1989; Skinner, Holt, and Smith 1989). Design based analysts argue that the design elements must be included in the analysis. Specialized software such as SUDAAN, WestVar, and a new set of complex survey commands in Stata were created to estimate population parameters and variances by incorporating primary sampling units (PSU), stratification, and weighting information. Doing this eliminates the "nuisance effect" that clusters and stratification create so that we get the "true effect" of the variables (Holt 1989).

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[21] Korn and Graubard (1995) suggest that weights make the greatest difference when estimating population means. However, weights can influence regression estimates when the sampling strategy is related to the outcome variable, the model is very misspecified, or an omitted variable has a strong interaction with an independent variable and is highly correlated with the weights. Korn and Graubard (1995) also warn that using weights increases the variability of the estimates. Consequently, there is a trade off between the potential for a larger bias in the population estimators without using the weights and the potential for larger variability in the weighted estimators (p. 291).

[22] I did not adjust the sampling weights that NCES provided when I systematically eliminated students. When I compared the distribution of the panel weights before and after eliminating transfers and races other than Black and White, I found that the weights for the reduced sample had a larger mean and a smaller variance. Comparing the largest weights before and after reduction, it appears that the students I

Model based analysts assert that as long as the model is correctly specified, design effects do not need to be taken into account. Lee, Forthofer, and Lorimor (1986) claim that this approach usually ignores sampling weights as well. One way to achieve this would be to incorporate variables that reflect how the sample was clustered and stratified. According to my review of the literature this can be accomplished in two ways: traditional regression estimation with statistical controls or hierarchical linear modeling.

The former can be achieved through including measures on which the sample was stratified and clustered as controls and performing variance estimation using either Taylor series approximation or replication techniques (replicated sampling, Balanced Repeated Replication, Jackknife Repeated Replication).[23] These types of variance estimation compensate for the correlation between individuals in the same cluster. Thus, including variables that measure school size, proportion of racial-ethnic minorities in the school, urbanicity, Census region, school type, and race, using the sampling weights, and performing Taylor series approximation of the standard errors may be enough to remove the influence of the sampling design in my models.

The other approach that is very popular in the education literature is known as hierarchical linear modeling (or multilevel modeling) and requires specialized software (HLM, MLn, MLwiN) although SAS PROC MIXED commands can also be used (Qu 1997). Essentially, this approach assumes that factors at the cluster level predict associations at the individual level. Put differently, some associations at the individual level (e.g., family SES and student achievement) vary from cluster to cluster (e.g., they depend on the school SES). This strategy also partitions the variance in individual level

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dropped represented those with the smallest probability of being selected. The effects of systematically removing these respondents are unknown.

outcomes by attributing portions to the cluster level, the individual level, and the rest to random error. In this sense, hierarchical linear modeling draws heavily from analysis of variance techniques and takes advantage of the influence of cluster characteristics. This type of modeling typically requires a large number of clusters preferably with the same number of observations per cluster, and uses a small number cluster level predictors (for an extended description of these models see Bryk and Raudenbush 1992).

Because my work provides a starting point for understanding the differential effects of context on women's and men's experiences and achievements, I do not limit my contextual factors to a few potent predictors. Further, I assume that the interaction between gender and family context (and individual experiences) are not functions of the school context. In other words, I hold constant aspects of school context when considering family and labor market effects on adolescent girls' and boys' plans for the future, self-esteem, and adult achievements. Determining whether family context and gender interaction effects vary from school to school requires isolating a small number of school level variables to serve as predictors. The purpose of my research is to determine just that: Which school level factors have a different effect on the experiences of adolescent girls and boys? For this reason, hierarchical linear modeling would not be appropriate. Once the list has been narrowed, this approach would be most appropriate when theory suggests that these associations vary across contexts.

However, this still leaves the option of using the design-based corrections: cluster, stratification, and weighting elements. I incorporate the design factors when estimating population proportions, means, and bivariate associations since they are most susceptible to bias. The primary reason I do not use the design information when I estimate the

[23] See Lee, Forthofer and Lorimor (1989) for a discussion of these techniques.

parameters of my regression equations is because we know very little about the effects of clustering and stratification on simultaneous equation models especially when we use two stage least squares estimation.[24] I review the issues pertaining to simultaneous equation models below. As an alternative to the design based analysis, I use sampling weights, statistical controls, and a Taylor series approximation of the population variances for the regression analyses.

Endogeneity, Reciprocal Effects, and Limited Dependent Variables

My conceptual model is best described as a system of equations. This implies that some dependent (endogenous) variables become "independent" variables in other equations.[25] As a result, several estimation problems, issues of endogeneity and simultaneity, affect the model. These are related, but distinct problems. A system of equations can suffer from an endogeneity problem even when the variables are not reciprocally related. For example, I argue that educational expectations and educational attainment in adulthood are products of the same underlying process. Motivation and interest in school are unmeasured factors that theoretically influence both "outcomes." The model predicting educational attainment with educational expectations as an

[24] At the time of this writing, StataCorp. was in the process of creating new statistical routines for complex surveys and two stage least squares estimation. Missing data also create a challenge when performing analysis with the complex survey adjustments. To run these statistical routines, the primary sampling units (schools) must have at least two observations each with complete information. Because some HSB schools had very few students and many students did not provide complete information across all of the variables I use (this was especially true for measures of math and science course work and self-esteem), a number of primary sampling units had one student with complete information. Under these conditions, estimation cannot occur. To estimate these models, these schools must be merged with schools in an adjacent (and similarly composed) strata. For instance, students from predominantly Black schools must be merged with another strata that contains students in predominantly Black schools. Although determining the composition of the strata requires some investigating, it is possible. The greater problem results after performing numerous merges. This essentially compromises the initial sampling design that we were trying to take into account. How many merges are too many? What are we really predicting under those conditions? The literature provides little guidance to researchers facing these challenges.

"independent" variable has an endogeneity problem, but these variables are not reciprocally related in my model because of time ordering. Educational expectations were measured in 1982 whereas educational attainment was measured in 1992. Nevertheless, the error terms are most likely correlated between equations and the error term of one equation (educational attainment) is correlated with educational expectations when these expectations serve as a predictor of educational attainment. These are examples of endogeneity problems.

Simultaneity refers to reciprocal effects. Under these conditions, endogeneity problems result because the factors that are reciprocally related are decided at the same time and are most likely influenced by the same underlying process. For instance, I argue that plans for the future are reciprocally related. Deciding how far to go in school and when to have children may be a function of the same underlying process that I cannot adequately measure: the personal weighing of opportunity costs and all the factors that are involved. If we acknowledge that these endogenous variables are influenced by some of the same factors, then using them as predictors of each other biases the parameter estimates because the error term in one equation is correlated with the endogenous "predictor" variable (and possibly other variables). Below, I describe the estimation challenges and my solutions in more detail.[26] A third issue relevant to my work pertains to the use of limited dependent variables. In subsequent paragraphs, I explain how I deal with this.

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[25] Technically, exogenous variables are "predetermined" variables. In other words, they are not influenced by the other variables in the equation. Endogenous variables are dependent variables determined by the system under examination.

[26] For an excellent discussion of simultaneous equations see Hanushek and Jackson (1977), Berry (1984), Blalock (1964), and Gujarati (1995). I am extremely grateful to Karen Smith Conway for bringing these issues to my attention and assisting me with the challenges they create.

The larger issue here, and the reason I address this in a separate section, is that endogeneity, simultaneity, and limited dependent variable estimation result in biased parameter estimates if ignored. The purpose of my dissertation is to determine whether the transition to adulthood *as a whole* is gendered. In this case, the bias in individual parameter estimates is of less import. However, these estimates provide clues as to *how* the process is gendered. For this reason, I give serious attention to these matters.

Path analysis is an example of a system of equations. When none of the paths are reciprocal and the error terms between equations are not correlated with each other or the exogenous variables, ordinary least squares regression is appropriate. In my work, I assume that most of the paths between my dependent variables are reciprocal and I assume that more than one dependent variable is influenced by some of the same underlying factors (represented by the error terms). Under these conditions, ordinary least squares regression is inappropriate. We are most likely to find an endogeneity problem among sets of factors over which an individual has some control. The economics literature refers to these as "choice" or jointly determined variables.

How does this relate to my work in particular? My conceptual model includes several jointly determined outcomes: academic track, academic achievement, work experience, math and science course work, self-esteem, plans for the future, and all of the adult status outcomes. Some are more likely to be related than others. For instance, the four plans for the future (educational, occupational, childbearing, and marriage) are likely to be affected by the same underlying process. Education related outcomes are also more likely to be influenced by the same underlying process. Statistically, we have a serious estimation problem because the error term in one equation is correlated with the error

term (and "independent" variables) in another equation. This biases our estimates of the effects of one or more variables in the equations.

In addition, I argue that some of these jointly determined outcomes are reciprocally related. For example, I hypothesize that not only does the age at which a first child is expected influence educational plans, but educational plans affect the age at which a first child is expected. Planning to further one's education beyond high school may significantly delay the age at which a young woman expects to have a child, and expecting to have a child later may increase the amount of education a young woman expects to complete. In the case of simultaneous equations, the error term of one equation is correlated with one or more "independent" variables.

If the endogenous variables are continuous, there are several ways to eliminate this correlation. I can either substitute other variables (instrumental variables) for the "problem" variables or use two stage least squares estimation. Or, I can estimate a reduced form equation that essentially absorbs the effects of the "problem" variables redefining them in terms of the exogenous variables and error terms.[27]

The benefit of using two stage least squares estimation is that I can still determine the effect of the endogenous variables on the other outcomes because we obtain structural parameter estimates for these variables. Yet, this comes at a cost. Standard errors and measures of explained variance (R^2) become inflated and need to be adjusted (Berry 1984). On the other hand, reduced form models provide information on the "total effect" of the exogenous variables, but cannot tell us how the intervening variables (previously endogenous) affect the outcomes. Standard errors and the R^2 are unaffected by the use of

[27] There is a body of literature that addresses two stage estimation for binary outcomes (Amemiya 1974; Amemiya 1978; Bollen, Guilkey, and Mroz 1995; Foster and McLanahan 1996; Maddala 1983).

reduced form equations. Later in this chapter, I review which strategies I will use and when I use them.

In addition to resolving part of the endogeneity problem through the use of statistical techniques, I reduce it through another strategy: elimination of redundant or poorly measured variables. Academic track is correlated with parents' and respondent's educational expectations and academic achievement. In many respects, it does not provide any new or independent information. For that reason, I drop the variable from my analysis. Second, the measurement of work experience in this data set does not contain information on the duration of the jobs that high school students held. Mortimer and Johnson (1996) argue that the duration and intensity of work experience in high school matter most as predictors of adult outcomes. Since this information is not available, I chose to eliminate this variable as well. If these variables are important determinants of the outcomes, then I have an omitted variable problem that biases my parameter estimates. Eliminating the correlation between the error term and exogenous variables through two stage least squares estimation or reduced form equations minimizes this problem.

Girls' completion of advanced math and science courses and their effects on socio-economic outcomes in adulthood are of great interest to many scholars. There are a number of issues related to these particular equations that force me to forego estimating these effects. A large proportion of missing data and few distinct variables that would enable me to find unique solutions for the parameter estimates are two reasons to postpone this analysis. More importantly though, determining these effects is tangential to my overall work. Therefore, I include preliminary analysis of the differential effects of

gender and social context on advanced course work choosing to make the link between course work and attainment in a future paper. In sum, the only remaining endogenous variables in my model are self-esteem, plans for the future, and the five adult status outcomes.

Prior to estimating the simultaneous equation models, each equation must be "identified." Identification means that I need to find a unique solution for each parameter estimate (the regression coefficients). If the equations do not contain enough information (under identification), I cannot obtain a solution. Basically, identification is a "shortage of useful information" and a conceptual (not a statistical) problem. To determine whether the equations are identified, each must meet order and rank conditions of identification.[28] Both conditions refer to the composition of the matrices that contain information from the system of equations. These conditions determine whether I am able to find one solution per parameter. The order condition is a necessary, but insufficient condition of identification whereas the rank identification condition is necessary and sufficient. Rank tells us whether the equation is identified or not; order tells us whether the equation is over-identified or exactly identified.

To explain the order and rank conditions, I introduce the following: M = number of endogenous variables (system), m_i = number of endogenous variables in a given equation$_{(i)}$, K = number of predetermined variables in the model (system), and k_i = number of predetermined variables in a given equation$_{(i)}$.[29] According to Gujarati (1995),

[28] Order refers to the number of rows and columns in a matrix. The rank of a matrix is defined as "the order of the largest square submatrix whose determinant is not zero" (Gujarati 1995, p. 800).

> Definition 19.2 (order condition) In a model of M simultaneous equations, in order for an equation to be identified, the number of predetermined variables excluded from the equation must not be less than the number of endogenous variables included in the equation less 1. If K - k = m - 1, the equation is just identified, but if K - k > m - 1, it is over identified. (p. 665).

The rank condition of identification requires that:

> In a model containing M equations in M endogenous variables, an equation is identified if and only if *at least* one nonzero determinant of order (M-1)(M-1) can be constructed from the coefficients of the variables (both endogenous and predetermined) excluded from that particular equation but included in the other equations of the model (Gujarati 1995, p. 667).

Although determining order is simply a matter of counting included and excluded variables from the equation, establishing rank identification is more complicated. Both Gujarati (1995) and Berry (1984) provide an algorithm for evaluating the equations. Describing it is beyond the scope of the present discussion.

However, many systems of equations do not initially meet rank and order identification until a number of restrictions are imposed. Imposing identification restrictions requires that I either assume that certain exogenous variables do not directly affect the endogenous variable and/or assume that the error terms between equations are not correlated. Both strategies would allow me to solve the equations and obtain unique parameter estimates. However, the latter assumption is untenable in my model. The former strategy requires adding information to the system by excluding a variable from one equation and including it in another.[30] Manski (1995) and Berry (1984) caution that adding more variables without a strong substantive reason for making those links does not aid in the estimation process. For that reason, I need to impose substantively informed

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[29] The remaining rules and notation come from Gujarati (1995, p. 664-669).

[30] As an aside, reduced form equations are always identified except in cases of high collinearity (Berry 1984, p. 29).

restrictions. In Chapter 5, I discuss the identification strategies I use when estimating the structural equation models with two stage least squares regression.

Last, my use of limited dependent variables prompts other concerns. How do I cope with the censoring of the family formation expectations?[31] The censoring of a variable suggests that for certain respondents, information is "unobserved" on the endogenous variable of interest, but information on the exogenous variables exists. In other words, there could have been information for the respondents, but some event kept us from obtaining this information. In the case of my work, family formation expectations are censored at two extremes. When asked the age at which they expected to have a child, respondents were given the following options: already had a child, never expect to have a child, expect to have a child before age 18, expect to have a child between 18 and 29 (with year intervals for each age in between), and expect to have a child at or over age 30. Two types of censoring occurred: the survey instrument artificially censored the sample by combining anyone who expected to have a child at age 16 or 17 into the under 18 category. A similar approach was used at the other end of the distribution. And, respondents who had a child by the time of the survey were no longer able to express their expectations. The event had already occurred. The same problem exists with the variables measuring the age at which the respondent expected a first marriage.

Since already having a child or marrying at the time of the survey does not necessarily reflect the age at which one expected a first child (or marriage), I removed these participants' responses from the measure and created a new variable to note whether that they had experienced these events by 1982. I intend to perform separate

analyses to determine how context affects the occurrence of these events differently for young women and men.

I combined the respondents who do not expect to have a child or marry with those who expect to do this at age 30 and older. If we conceptualize family formation expectations as how *soon* the person expects these events to take place, then the respondents who claimed that the events would "never" take place represent the extreme end of the distribution.[32] Because the intervals between age expected to marry and have children are evenly spaced and the censoring does not affect a large percentage of the sample (less than 15% of the sample falls in any one of the tails), I treat these variables as continuous.[33]

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[31] For a more in-depth discussion of these issues see Long (1997) and Maddala (1983).

[32] Who are these youth who never expect to marry or have children? Is this expectation reported consistently? Adolescent boys were significantly more likely than adolescent girls to report never expecting to marry (8% versus 5%, $p < .001$). And, 31% of those who did not expect to marry said that marrying and having a family were not important to them. Seventy-one percent of those who did not expect to have children said that having children was not important. In an effort to determine whether Catholic respondents were more likely to report never expecting to marry (some respondents might expect to enter religious orders), I compared religious affiliation and family formation expectations. Catholics were as likely as members of other religious groups to report never expecting to marry or have children. To indirectly test whether mother's educational, occupational, and family formation decisions influenced a daughter's decision not to marry or have children, I performed probit analysis (with the complex survey adjustments) using no expectation to marry or have children as separate endogenous variables and regressed them on mother's occupation and education. Mother's occupation and education had no effect on daughter's expectation *not* to marry. However, mother's education was positively associated with daughter's expectation to never have children after controlling for mother's occupation. Finally, family formation expectations among this group of respondents were not stable over time. As sophomores, 70% of the respondents who said they would never marry or have children changed their minds by 1982. After 1982, questions about family formation expectations were no longer part of the survey. Consequently, I could not assess the stability of these expectations beyond 1982.

[33] Tobit regression is frequently used to estimate effects when the dependent variable is censored. To determine whether the results are different from ordinary least squares regression, I estimated the reduced form equations for expected age at first birth and expected age at first marriage that I discuss in Chapter 5. The tobit regression results were nearly identical to the OLS regression results. However, the coefficients were slightly larger for the tobit regression. This difference only affected the significance level for the effect of county unemployment rates on adolescent girls' expected age at first birth. In the tobit regression, an increase in county unemployment rates increased the age at which a first child was expected for girls only ($p < .05$). In the OLS regression, its effect was marginally significant ($p < .06$). Because we do not know the actual values for the censored observations, using the predicted values from tobit regression requires further adjustments that are beyond the scope of this dissertation. The minor differences between tobit and OLS results warrant continued use of OLS for the two stage least squares estimation.

To summarize, I have two sets of variables that mediate the effects of social context on the adult status outcomes: plans for the future and self-esteem. I initially treat them as endogenous variables and estimate the effects of social context on plans for the future and self-esteem separately. By doing this, I am essentially estimating reduced form equations. The influence of self-esteem on plans for the future is redefined in terms of the exogenous variables and error terms, but its influence is not estimated through structural equations. Plans for the future are similarly redefined in terms of the exogenous variables and error term.

To resolve the other issues pertaining to endogeneity and simultaneity, I do the following. First, I split my analyses into two parts: plans for the future and adult status outcomes. Then, I create simultaneous equation models that examine the effects of social context on plans for the future and I model certain plans as reciprocally related to each other. To test the reciprocal relations, I use information about women's experiences because previous research suggests that women's achievements are truncated by family formation whereas men's are not (Marini 1978b, 1980, 1984c). The models I create will enable us to test whether these associations hold for the decision making process as well. See Figure 4.1 for an illustration of this model. In Chapter 5, I address which exogenous variables have a direct influence on these plans since they differ depending on the equation and identification restrictions. For now, I represent their effect with an X.

Let Y_1 = educational expectations, Y_2 = occupational status expectations, Y_3 = age at which first child is expected, Y_4 = age at which first marriage is expected, X = the exogenous variables, and U = error term. Specifically, I assume that the occupational status a student expects to achieve by age 30 determines how much schooling a person

thinks she or he will obtain (see Equation 4.1). And, the age at which the respondent expects a first child will influence how much education she or he expects to complete. According to Marini (1984c), the age at first marriage had a negligible effect on educational attainment compared with the age at first birth for women. I assume that the decision making process responds similarly. Therefore, I do not include the age at which one expects to marry as a direct influence on educational plans. Instead, I argue that the age at which one expects to marry directly influences the age expected to have a first child.

$$[4.1] \quad Y_1 = \alpha + \beta_2 Y_2 + \beta_3 Y_3 + \gamma_1 X_1 + \ldots + \gamma_k X_k + U_1$$

I assume that occupational status plans are influenced by the amount of schooling a person expects (see Equation 4.2). However, I do not assume that occupational plans are directly influenced by family formation plans. Instead, I suggest that the age at which one expects to have a first child directly affects educational plans and the age at which one expects to marry directly affects the age at which a first child is expected. Then, they indirectly affect occupational status plans. Because of their indirect influence, I do not include them in this equation.

$$[4.2] \quad Y_2 = \alpha + \beta_1 Y_1 + \gamma_1 X_1 + \ldots + \gamma_k X_k + U_2$$

As illustrated in Equation 4.3, I also assume that the age at which one expects to have a child is directly affected by the age at which one expects to marry, educational attainment expectations, and occupational status expectations. In this case, occupational status expectations imply a commitment to a career that for many women in high status jobs requires delayed childbearing and operates independently of the education expected.

$$[4.3] \quad Y_3 = \alpha + \beta_1 Y_1 + \beta_2 Y_2 + \beta_4 Y_4 + \gamma_1 X_1 + \ldots + \gamma_k X_k + U_3$$

In Equation 4.4, the expected timing of marriage, I assume that the age at which a first child is expected is the only endogenous variable to enter the equation since the others exert their influence through childbearing expectations.

$$[4.4] \quad Y_4 = \alpha + \beta_3 Y_3 + \gamma_1 X_1 + \ldots + \gamma_k X_k + U_4$$

Given the increased attention to teen childbearing, I provide a preliminary examination of this by investigating whether teen mothers and fathers come from different social contexts (see Figure 4.2). When predicting the adult status outcomes (educational attainment, occupational status attainment, residential independence, parental status, and marital status), I treat each outcome as a separate transition. I estimate these using reduced form equations (see Figure 4.3). Essentially, this will determine how social context affects women's and men's achievements differently without explaining how plans for the future differentially affect these achievements.

The AAUW's concerns about gender differences in self-esteem prompt me to determine whether social context has a different effect on young women's and men's self-esteem. I also investigate whether self-esteem has a different and lasting impact on women and men's adult status outcomes. See Figure 4.4.

Clearly, these are not the only models that can be constructed from the literature on gender and the transition to adulthood. However, my work provides a necessary starting point by determining whether and how the transition to adulthood is gendered. I argue that finding interactions between gender, social context, and individual level outcomes as I examine each of these transitions is sufficient to suggest that the process is gendered. Additional analysis would only serve to elaborate my findings.

Last, how do I resolve the sampling design issues specific to my models? Research addressing the design effects on these types of models, especially simultaneous equation models is sparse. Traditional statistical techniques do not compensate for the inflated sampling error that results from multi-stage cluster sampling. Techniques that take this effect into account are in order. Since cluster sampling does not seriously affect population parameters and because one set of my analyses requires two stage least squares estimation, I resort to adjusting the sampling errors through sample weights and the Taylor linearization estimates of the population variances.[34] Essentially, this ignores the design effects and assumes that the observations are independent. However, I see no other way around these issues.

[34] Detailed information on Taylor series linearization approximations of the standard errors can be found in Lee, Forthofer and Lorimor (1989) and StataCorp (1997). Briefly, this power series technique converges on the "actual" value of the standard error taking into account the sampling weight information. It creates "robust" estimates of the parameter variances that tend to be larger than standard errors achieved through "regular" estimation techniques. Robust standard errors do not assume that the error term is normally distributed or that the variance = σ^2. We also make no claim that the model is true and make fewer assumptions about the influence of the error term on the parameter estimates. In essence, the robust standard error is the standard error of the calculated parameter estimate that would be obtained through repeated sampling and re-estimation of the parameter.

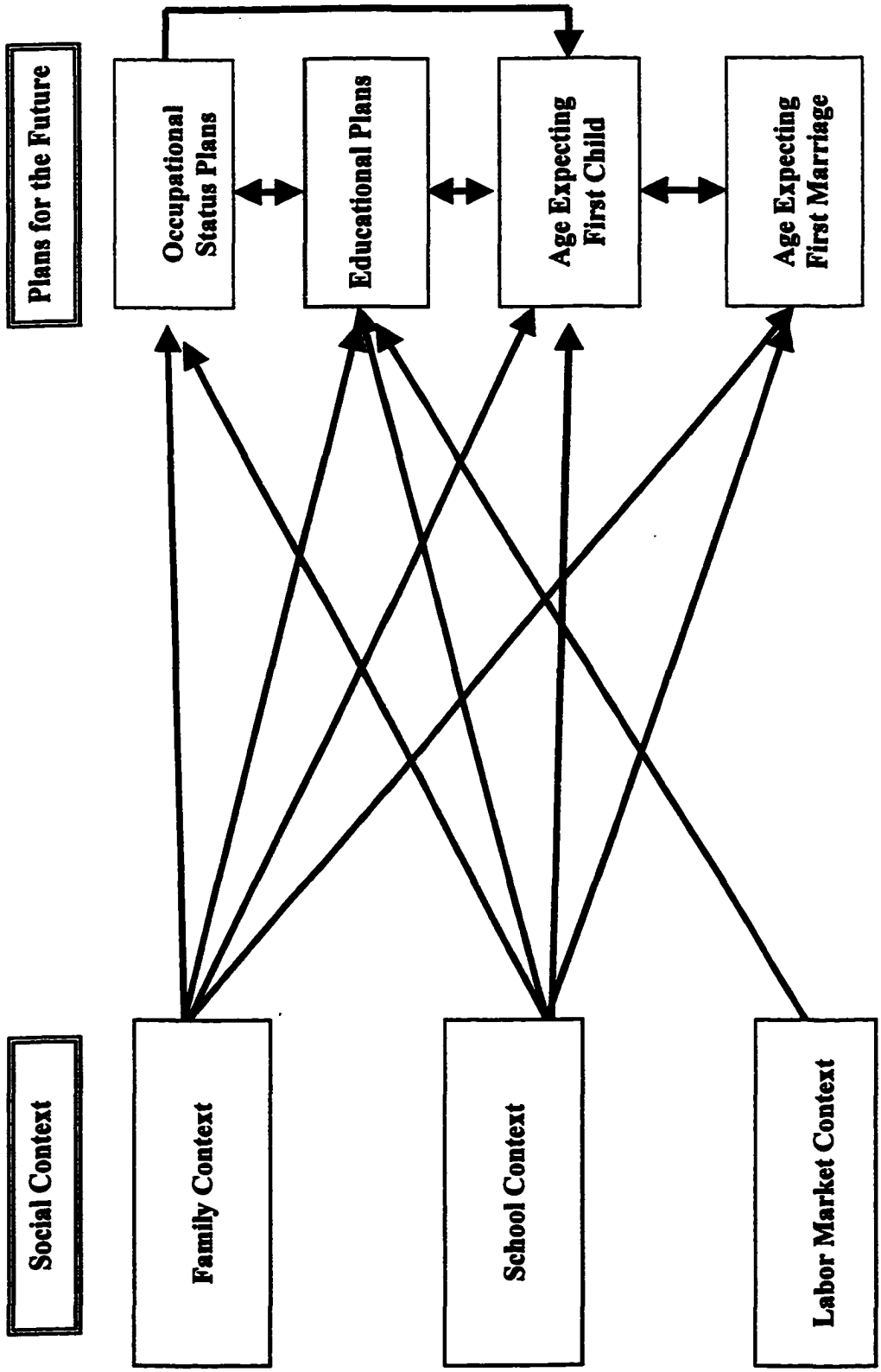


Figure 4.1. The Gendered Decision Making Process
Arrows represent anticipated gender interactions.

Figure 4.2. The Influence of Social Context and Self-Esteem on Adolescent Girls' and Boys' Parenting
Bold arrows represent anticipated gender differences. Dotted arrows represent paths estimated in Figure 4.4.

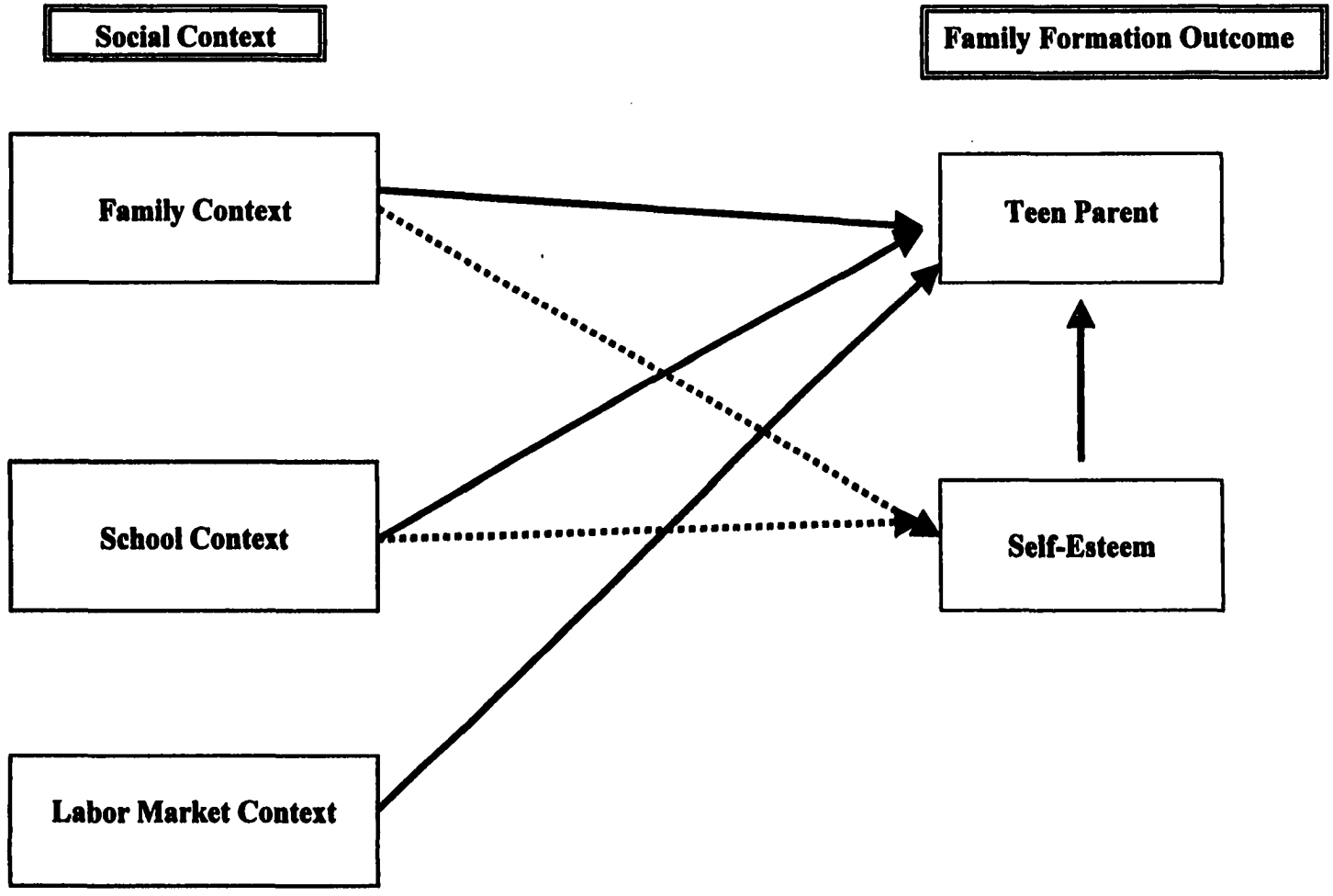


Figure 4.3. The Influence of Gender and Social Context on Attainment in Reduced Form
Arrows represent anticipated gender interactions.

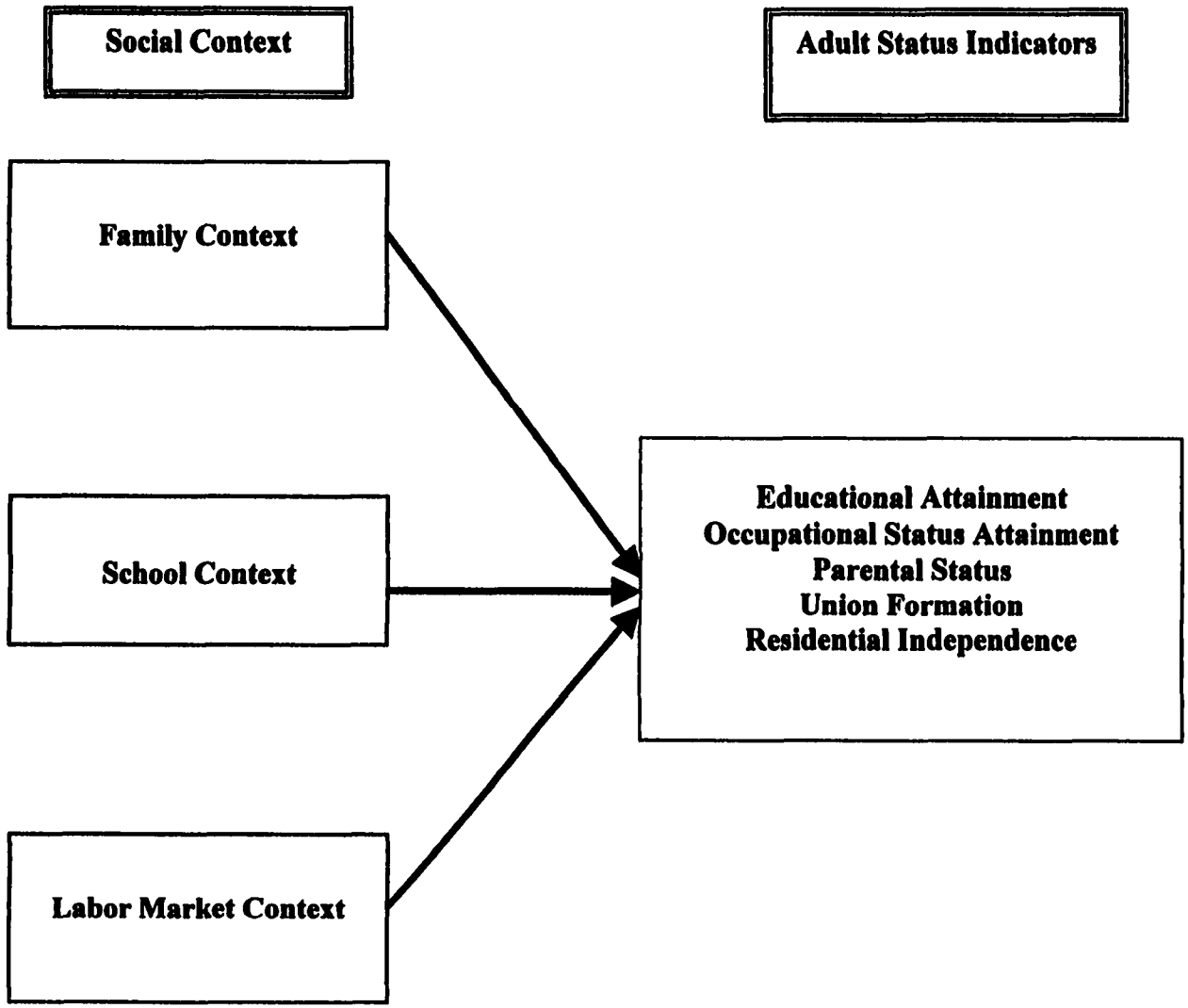
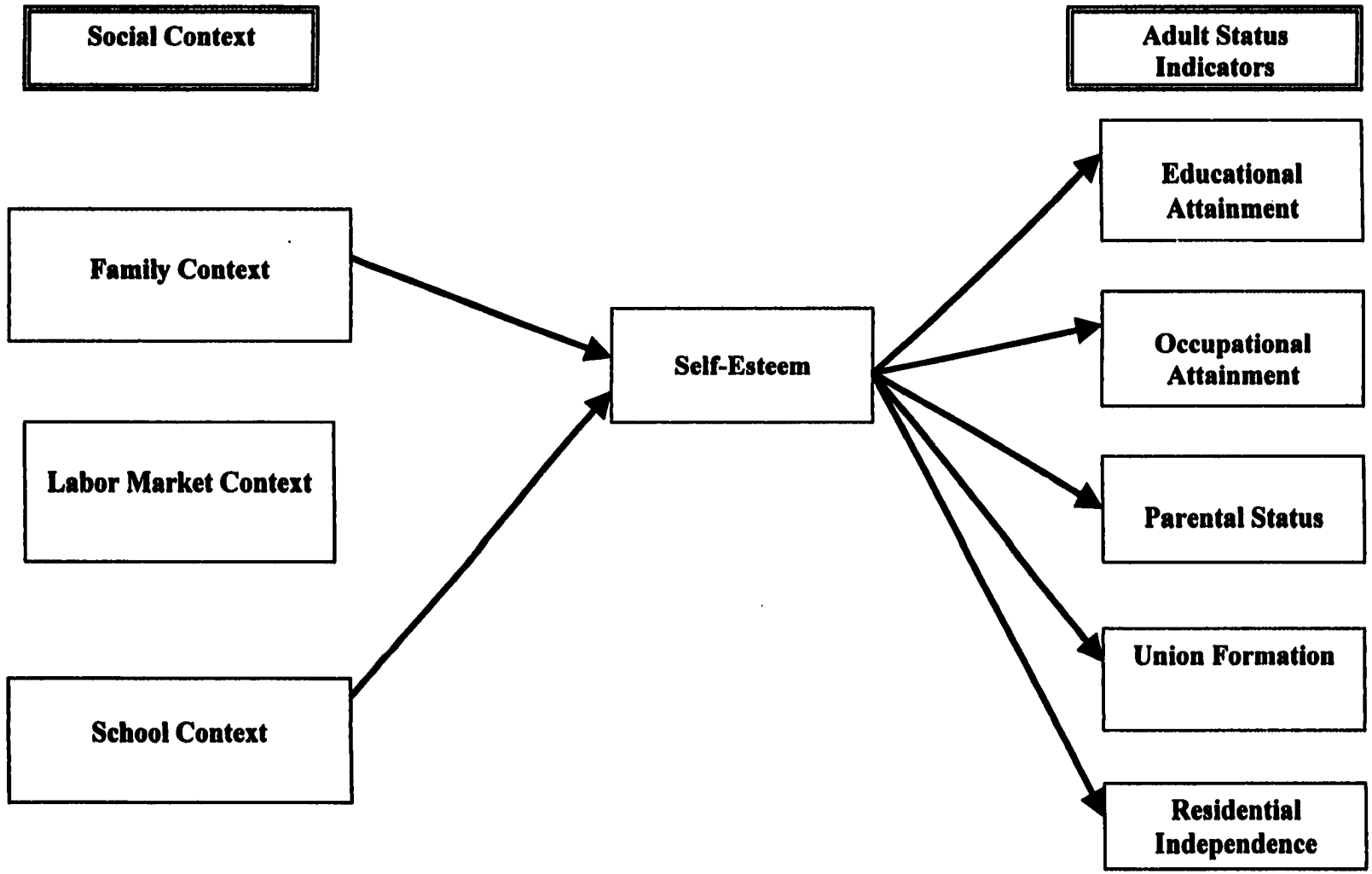


Figure 4.4. Gender, Social Context, and Self-Esteem: Long Term Effects on the Transition to Adulthood
Arrows indicate anticipated gender interactions. Direct effects of social context are assumed but not shown.



Operationalization of the Concepts

My models incorporate three social contexts that I hypothesize will affect women's and men's experiences differently: labor market conditions, school context, and family context. Plans for the future are modeled as outcomes in the gendered decision making process during adolescence. The adult status outcomes I examine are educational attainment, occupational status attainment, residential independence, union formation, and parental status. I estimate self-esteem as an endogenous variable and include it as an independent variable in the adult status outcome models. The following are definitions of each concept and their measures.

Gender and Race. I operationalize **gender** at the individual level as a dichotomous variable measured as sex (1 = female, 0 = male).[35] **Race** is also measured as a dichotomous variable distinguishing Blacks and Whites (1 = Black, 0 = White).

Labor Market Conditions. Local labor market conditions are represented by the **county unemployment rates**. Because high collinearity existed between the 1980, 1981, and 1982 measures of this indicator ($r >= .86$), I only use the 1982 measure. This information was compiled from Bureau of Labor Statistics and assigned by NORC to each student based on the school's geographic location.

School Context. With the exception of four indicators (teachers' encouragement to attend college, best friend's educational plans, average school socio-economic status and average parental involvement in the school), all school context information was reported by the principal of the school in 1980. I use two measures of **sex composition** of the

[35] To this point, I have referred to gender as an individual and institutional property. From this point forward, I use "sex" to designate the variable that distinguishes females and males at the individual level and "gender" to refer to the ways in which differences between women and men are embedded in social institutions and processes. See West and Zimmerman (1987) for further distinctions.

school: the percent of female students and the percent of female faculty. The **racial composition** of the school is measured using two variables: the percent of Black students and the percent of Black faculty.

School type is measured as public, Catholic, and other private. I use two dummy variables to represent this: Catholic and private. The contrast category is public. The school's **geographic location** is denoted by four Census regions: New England-Mid Atlantic, Central, South, and Mountain-Pacific regions. I use three dummy variables to represent this with the South as the contrast category. The **urbanicity** of the school refers to whether the school is in an urban, suburban, or rural area. This is represented by two dummy variables with rural as the contrast category.

Encouragement from teachers is measured as whether the student perceives that teachers expect her or him to attend college after high school. This is a dichotomous variable (1= expected to attend college, 0 = other expectations). **Friend's encouragement** is measured as whether the best friend (from this school) plans to attend college after high school. This is also a dichotomous indicator (1 = expected to attend college, 0 = other expectations). The response to these two questions came from the student survey.

I constructed the **student-teacher ratio** by dividing the total high school membership by the number of classroom teachers as reported by the principal. I expect that increases in the ratio at the upper end would have less of an impact than increases in the ratio at the lower end. Therefore, I performed a natural log transformation. Two measures of school context were aggregated from individual level information and redistributed to each student in the school. I created the **school's average socio-**

economic status measure by aggregating and averaging a standardized socio-economic status composite scale that NORC created for all sophomores and seniors in 1980. This means that the within school sample contributing to this aggregate measure had a maximum of 72 students with family socio-economic information (36 sophomores and 36 seniors). However, the number of students contributing information to this measure depended on the school size. The individual level measure of family SES was aggregated and averaged within each school and re-distributed to each student in the sample.

In 1982, students from the original sophomore cohort were asked how often their parents attended parent teacher association (PTA) meetings, attended parent-teacher conferences, and volunteered at the school. The responses for each variable were never, once in a while, and often. Using information from the full sophomore cohort in 1982 (nearly 28,000 students), I aggregated and averaged these parental involvement indicators within each school. Following the same procedure as above, I redistributed this aggregate information to each student in the sample. This variable of **average parental involvement in the school** becomes a measure of school social capital.[36]

Family Context. Student respondents provided the remaining information. Unless otherwise noted, all the variables pertain to 1980 information. To examine the effect of **family structure**, I use one dummy variable that signifies whether the student lived in a single parent household (1 = yes, 0 = no). All other family forms are represented in the contrast category. The **number of siblings** is the summation of an intricate reporting of the number of siblings by birth order and spacing. See the Appendix for more details.

[36] Although I intended to use per pupil expenditures as one indicator of school quality, slightly more than half of the principals reported this information. Because so few students had this information, I chose to drop this variable from my analysis. Preliminary, multivariate analysis also suggested that the percentage of

Grandparents living in the household is a dichotomous measure denoting whether the respondent lives with their grandparents (1 = yes, 0 = no). **Family socio-economic status** is a composite variable created by NORC that is comprised of father's occupation, father's education, mother's education, family income, and material possessions in the household.[37] It is measured in percentiles. The correlation between this indicator and the individual items exceeded r = 0.57 for each measure. I also incorporate **father's education** and **mother's education** as separate variables. These variables have nine categories ranging from less than high school to PhD/MD.[38]

Other resources that benefit children include general supervision, parental monitoring of school progress, and educational expectations. The variable, **parental encouragement to attend college**, combines indicators of mother's and father's educational expectations. This is coded as whether neither, one, or both parents expect the child to attend college. **General monitoring** is measured as whether the parents know the child's whereabouts at all times and know what the child is doing. This is a dichotomous indicator (1 = yes, 0 = no). **Parental monitoring of child's school progress** refers to whether neither, one or both parents keep close track of how well the child is doing in school.[39] Even children whose father (or mother) did not live in the

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students enrolling in college had no effect on the outcomes in my analysis. For this reason, I chose to eliminate it from my model.

[37] These material possessions pertain to whether the respondent's family had: a daily newspaper, encyclopedias, typewriter, electric dishwasher, two or more cars or trucks that ran, more than fifty books, a pocket calculator, and whether the respondent had a room of her/his own.

[38] Twenty-seven percent of the original sample lacked information on mother's educational level and thirty-five percent failed to provide information on father's educational level. To reduce the amount of missing data, I substituted parents' educational level as it was reported in 1982. The correlation between the 1980 and 1982 data for mother's education was r = .85. For father's educational level, the correlation was r = .88. Therefore, I felt confident replacing the missing data. This substitution strategy reduced the missing data substantially. Only 7% had no information on mother's education and 12% had no information on father's education afterwards.

[39] Residential mobility since fifth grade had no effect on the adult status outcomes in my preliminary analysis. As a result, I dropped it from my analysis. Information on parental involvement in the child's

household were able to provide information on that parent's level of involvement, expectations, and socio-economic background.

Individual Experiences. Schooling experiences encompass several factors. **Academic achievement** is measured in percentiles using a composite index created from the reading, math, and vocabulary tests administered in 1980. Although this variable is a function of innate ability and social forces, I include this as a control for innate ability since no other measures are available. I also control for **discipline problems in school** since these may create a self-selection bias by affecting academic achievement, plans for the future, teen family formation, and adult outcomes. In 1980, the student reported whether she or he had discipline problems in school. This is measured as a dichotomous variable (1 = yes, 0 = no).

Advanced math coursework is a dichotomous variables indicating whether the respondent completed at least one advanced math course (1 = yes, 0 = no). Advanced course work in math includes trigonometry or other upper level courses. **Advanced science coursework** is a dichotomous variable indicating whether the respondent completed at least one advance science course (1 = yes, 0 = no). Advanced course work in science includes course work in biology, chemistry, and physics. This information was compiled by NORC based on data provided by the student in 1982 (see the Appendix for more details). Eighteen percent of the students are missing data on this indicator. For this reason, these variables will not be part of my full model; however, I report preliminary analyses of math and science course work and their predictors in a later chapter.

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school was only collected for in school students and early graduates. Because including this variable at the individual level would exclude drop-outs, I chose to omit this variable and use the aggregate measure.

Plans for the future refer to the student's educational, occupational, and family formation expectations as reported in 1982. **Educational expectations** are measured as the highest level of education the student expects to achieve. This is a nine category ordinal variable ranging from less than high school to professional degree. Each interval represents two years of schooling. **Occupational expectations** are measured as the status of the occupation the student expects to obtain by age 30. I recoded the original variable from a nominal, 17 category indicator using the 1980 Nam-Powers-Terrie status scores (Terrie and Nam 1994). See the Appendix for details.

Family formation expectations refer to two variables: the age at which the student expected a first child and the expected age at first marriage. These variables range from under 18 to over 30. The intervals between these endpoints are measured in one-year increments. Students who reported that they already had a child or were married by 1982 were deleted. Those who reported that they would never marry or never have children were combined in the over 30 category.

I created a dummy variable to indicate whether the respondent had a child by 1982. This information was derived from the respondent when either she or he reported that her or his child lived in the household at that time or that the respondent already had a child when asked when she or he planned to have children. I label this variable **teen birth.** The variable was coded as (1 = yes, 0 = no). This is the same technique that Mayer (1991) used.

Self-esteem is a composite measure that averages the responses to six items from the Rosenberg self-esteem scale. I use the scale items from 1980. See the Appendix for the wording and coding of the six items. Four options ranging from strongly agree to

strongly disagree comprised the response set for the individual items. Twenty-nine percent of the respondents are missing information on this variable. Cronbach's alpha reliability for the scale was $\alpha = .73$ for women and $\alpha = .65$ for men. Because it serves as both a dependent variable and a predictor of attainment, I chose not to impute the missing values. Thus, individuals who are missing information on self-esteem are not included in analyses that incorporate this variable.

Adult status outcome variables. The final outcome variables of interest were measured in 1992. I measure **educational attainment** as the highest degree earned. The categories include less than a high school diploma, high school diploma, certificate, Associate's degree, Bachelor's degree, and an advanced degree. The last category combines Master's, doctoral, and professional degrees. **Occupational attainment** is measured as an ordinal variable consisting of 30 categories to which I assigned Nam-Powers-Terrie status scores for 1990 Census occupations. See the Appendix for more details. **Residential independence** refers to whether the respondent lives apart from the family of origin or other relatives. Living alone, living with one's child, a non-relative, and/or living with one's spouse constitute residential independence. This is a dichotomous variable (1 = independent, 0 = not independent). **Parental status** was measured as whether the respondent reported having a child. This is a dichotomous variable (1 = has a child, 0 = does not have a child).

Union formation refers to whether the respondent was ever involved in a committed, live-in relationship with another adult. This dichotomous variable is coded as ever married/cohabiting and never married. I place divorced, cohabiting, separated, married, and widowed respondents in the same category. Never married respondents

comprise the other category. Although some might argue that the "ever married/cohabiting" group represents a variety of different experiences, I combined them for two reasons. Steinberg (1991) and Erikson (1968) argue that one of the developmental tasks of adolescence (on the path to adulthood) is the ability to form intimate, satisfying emotional attachments. One way to note that this task has been achieved is to document whether the respondent ever married or is living with another adult. I combined these categories for practical reasons as well. Of the 7,669 individuals, only 64 reported cohabiting in 1992.

Gender, Social Context, and Individual Level Outcomes: Bivariate Associations

Table 4.1 provides a summary of the means and standard errors for the variables I use in my analysis.[40] These statistics are weighted by participation in all five waves of the study. My findings suggest that gender differences in initial resources and adult status outcomes abound. When we consider the composition and quality of the schools that adolescent girls and boys attended, we notice that girls attended schools with a higher proportion of Black faculty and students. Girls also attended schools with a higher proportion of female faculty and students. However, the average socio-economic status of the schools that girls attended was slightly lower than the socio-economic status of the schools boys attend. Girls were more likely to report that their best friend planned to attend college. I find no differences in the average level of parental involvement, student/teacher ratio, teacher encouragement to attend college, school type, region, or

[40] The significance test used to determine whether women and men differ on each of the variables is an adjusted Wald test. This test uses an F statistic $(d - k + 1)W/(kd)$ where k is the dimension of the hypothesis test, d = the total number of primary sampling units (PSUs = schools) minus the total number of strata, and W is the Wald test statistic. The degrees of freedom for the numerator of the F distribution is k and the degrees of freedom for the denominator are d - k + 1 (see StataCorp 1997, p. 438-9 for more information).

urbanicity of the schools that adolescent girls and boys attended. The unemployment rates of the counties they lived in did not differ either.

Gender differences also emerge as we examine various aspects of family context. Boys lived in families with greater socio-economic resources (status) and their parents were better educated than the parents of girls.[41] Girls had more parental support to attend college according to Table 4.2. Combined with best friend's plans, it appears that adolescent girls had more emotional support to attend college than boys did. The results in Table 4.3 suggest that there is no difference in the monitoring of girls' and boys' school progress. Parents invested "equal attention" to girls' and boys' school performance. On the other hand, girls were more likely to report that their parents knew their whereabouts at all times (see Table 4.1, general supervision). The family composition of adolescent girls and boys is nearly equivalent: they had the same number of siblings, and were equally likely to either live in single parent families or have their grandparents living with them.

According to Table 4.1, the schooling experiences of adolescent girls and boys were different. A greater proportion of boys completed advanced math and science course work and boys scored higher on the composite achievement test. I also find that boys were much more likely to report having discipline problems in school. Consistent with other empirical studies, boys reported higher self-esteem than girls.

Adolescent girls and boys also differed in terms of their plans for the future. According to Table 4.4, boys were more likely to expect to drop out of high school, finish high school or complete a two year degree. Adolescent girls were more likely to expect to complete some college without finishing a degree or to complete a Bachelor's degree.

Adolescent girls and boys were equally likely to expect to complete a graduate degree. Differences in the family formation expectations of adolescent girls and boys were more straightforward. Table 4.1 suggests that adolescent boys expected to marry and have children later than adolescent girls. The occupational status expectations of these young women and men were similar.

A look at early entrance into parental roles suggests that girls were more likely to bear a child as a teen. By the time the majority of the sample was 28 years of age, we find that young women and men differed across every adult status outcome except occupational status attainment. In particular, young women were more likely to be married or cohabiting, have a child, and reside independent of their family of origin. Table 4.5 illustrates the variation in educational attainment by sex. Men were more likely to be represented in the extremes of the distribution. They were more likely to complete a minimal amount of education or four or more years of schooling. Women, on the other hand, were more likely to complete a certificate or Associate's degree.

These findings suggest that adolescent girls and boys begin the transition to adulthood with different resources. They not only attend different kinds of schools and live in families with different socio-economic resources, but their parents treat them differently in terms of general monitoring and educational encouragement. Adolescent girls and boys also differ in their self-esteem, plans for the future, math and science course work, and whether they reported discipline problems in school. As sophomores in high school, boys outperformed girls on achievement tests that measured math, reading, and vocabulary proficiency. Once they reached chronological adulthood, I find that these young women and men differed across all but one adult status indicator.

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[41] This difference is not explained by race or the type of school these students attended.

Empirical Evidence of a Gendered Process

In the subsequent chapters, I perform multivariate analyses to determine whether the transition to adulthood is gendered. There are several ways to empirically demonstrate this. By splitting the sample and running the same regression equation for females and males, I am able to conduct a joint test of model equivalence. The Chow test for linear models and the log likelihood test for non-linear models determine whether the same model can be imposed on females and males.[42] These tests answer the question, is the process as a whole the same for females and males? Rejecting the null hypothesis of no difference in the models indicates that the effects of social context and other factors are different for females and males.[43] Under these conditions, I argue that the process being investigated is gendered. However, these tests of model equivalence do not identify *which* aspects of social context (and other factors) have a different effect for females and males.

To identify differential effects, I test every pair of regression coefficients in the models for females and males. This t-test identifies whether the effect of the variable is

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[42] To test model equivalence for the non-linear models, I use a likelihood ratio test. I calculated the log likelihood for the total sample model (without the variable "sex") and the log likelihood for both subgroups. I used sampling weights in all the models. Using –2[LL total sample – (LL females + LL males)] and degrees of freedom = number of parameters in the model, I was able to obtain a χ^2 test statistic. I compared this to the χ^2 critical value at the nearest degrees of freedom. Recall that clustering and sample weights increase heteroscedasticity and may influence the log likelihood values. Therefore, these tests of model equivalence may be inaccurate.

[43] An alternative to these techniques would be to enter interaction terms for all variables in the equation and perform a joint test of significance. This alternative increases the collinearity between variables in the model and makes it difficult to determine whether individual variables are significantly related to the dependent variable. Therefore, I chose to run the regression equations separately on the subgroups. One assumption of the Chow test is that the subgroup variances are equal. Cluster samples increase the likelihood of violating this assumption because they create heteroscedasticity. However, some have argued that the Chow test is fairly robust to violations of this assumption, but fails when the subgroup sizes are quite different or the difference between the subgroup variances is large (Schmidt and Sickles 1977). I performed a Goldfeld-Quandt test on the residual variances of the linear models. In some cases, the variances associated with the models were significantly different. Therefore, the Chow test should be treated as illustrative rather than definitive. Tests of equal variances are not usually conducted for probit regression models because the population variances for the latent variables are unknown and scaled to 1.

significantly different for females and males.[44] Testing regression coefficients is a more stringent criterion for determining whether the transition to adulthood is gendered because numerous factors influence and confound these results. The size and sign of the regression coefficients as well as their precision (as measured by the standard error) make the detection of a significant difference difficult. To the extent that I find significant differences, this is additional evidence that the transition to adulthood is gendered. I note the presence of these effects in the regression models by underlying the coefficients once if the effect is statistically significant at $p < .10$ and underlying the coefficients twice if the effect is statistically significant at $p < .05$.

Although less rigorous, an effect that is statistically significant for one group but not for the other is also evidence that the variable contributes to the gendering of the process. This is noted in the regression tables in bold face and the significance levels are listed at the bottom of the tables. Last, the Goldfeld Quandt test of equal variances indicates whether the unmeasured factors (population error variances) have the same effect for women and men. If the null hypothesis of equal variances is rejected, this suggests that the unmeasured factors also contribute to the gendering of the transition to adulthood. Although this test is frequently used to determine whether the Chow's assumption of equal variance holds, it also provides a point of contrast to the Chow test. Assuming constant variance is an unusual requirement when the populations are different. Throughout the analysis chapters that follow, I address each piece of evidence to determine whether and how the transition to adulthood is gendered.

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[44] The t-test I use to determine whether the regression coefficients are significantly different is $t = (b_f - b_m)/[\text{square root } (\sigma^2_{bf} + \sigma^2_{bm})]$ where b refers to the regression coefficient for each subgroup and σ^2 is the estimated variance associated with the regression coefficient. Given the size of my samples, the

Table 4.1. Means, Standard Errors, and Sampling Design Information by Sex

Variable	Females	Males	Strata PSU
Race	.15	.14	92
(1 = Black 0 = White)	(.01)	(.01)	923
	4064	3605	
Labor Market Conditions			
County unemployment rate, 1982	10.20	10.20	92
	(.13)	(.13)	923
	4064	3605	
School Context			
% Black faculty	7.88	6.87**	92
	(.55)	(.46)	842
	3753	3361	
% Black students	14.15	12.54**	92
	(.80)	(.71)	873
	3902	3451	
% Female faculty	49.23	46.83***	92
	(.53)	(.51)	892
	3952	3517	
% Female students	52.00	48.68***	92
	(.44)	(.41)	882
	3915	3493	
Average school SES	-.06	-.04**	92
	(.01)	(.01)	923
	4064	3605	
Average parental participation in the school	1.12	1.13	92
	(.02)	(.02)	921
	4063	3604	
Log students/teacher	2.91	2.90	92
	(.01)	(.01)	842
	3724	3375	
Teachers' educational expectations of student (1 = college 0 = other)	.29	.26	92
	(.01)	(.01)	923
	4064	3605	
Best friend plans to attend college	.66	.57***	92
(1 = yes 0 = no)	(.01)	(.01)	923
	4064	3605	
Public school	.91	.92	92
(1 = public 0 = other)	(.01)	(.01)	923
	4064	3605	
Private school	.03	.03	92
(1 = private 0 = other)	(.00)	(.00)	923
	4064	3605	
Catholic school	.06	.05	92
(1 = Catholic 0 = other)	(.01)	(.01)	923
	4064	3605	
Urban	.19	.18	92
(1 = urban 0 = other)	(.01)	(.01)	923
	4064	3605	
Suburban	.47	.48	92
(1 = suburban 0 = other)	(.02)	(.02)	923
	4064	3605	
Rural	.33	.35	92
(1 = rural 0 = other)	(.02)	(.02)	923
	4064	3605	

distribution of the t statistic approaches the asymptotic normal distribution. Therefore, I use +/- 1.96 as the critical value for $\alpha = .05$ and +/- 1.65 for $\alpha = .10$.

Variable	Females	Males	Number of Strata and PSUs
New England/ Mid- Atlantic regions	.22	.21	92
(1 = NE 0 = other)	(.01)	(.01)	923
	4064	3605	
Central region	.31	.32	92
(1 = Central 0 = other)	(.01)	(.01)	923
	4064	3605	
Mountain/Pacific regions	.13	.13	92
(1 = Mount 0 = other)	(.01)	(.01)	923
	4064	3605	
Southern region	.34	.34	92
(1 = South 0 = other)	(.01)	(.01)	923
	4064	3605	
Family Context			
Single parent family	.17	.16	92
(1 = single parent 0 = other)	(.01)	(.01)	922
	4012	3543	
Number of siblings	2.19	2.07	92
	(.05)	(.06)	910
	3828	3225	
Grandparents in the household	.058	.053	92
(1 = yes 0 = no)	(.005)	(.005)	923
	4058	3584	
Family Socio-economic status	49.43	53.98***	92
	(.63)	(.66)	917
	3908	3453	
Mother's education	.12	.15**	92
(1 = has a Bachelor's or advanced	(.01)	(.01)	918
degree 0 = other)	3924	3440	
Father's education	.19	.22*	92
(1 = has a Bachelor's or advanced	(.01)	(.01)	915
degree 0 = other)	3723	3355	
General supervision	.87	.76***	92
(1 = yes 0 = no)	(.01)	(.01)	922
	4017	3503	
Individual Experiences, Plans, and Adult Achievements			
Academic achievement test score	50.45	52.39*	92
	(.64)	(.73)	892
	3830	3351	
Advanced math courses	.09	.11*	92
(1 = yes 0 = no)	(.01)	(.01)	847
	3336	2932	
Advanced science courses	.07	.14***	92
(1 = yes 0 = no)	(.00)	(.01)	847
	3336	2932	
Disciplinary problems in school	.14	.22***	92
(1 = yes 0 = no)	(.01)	(.01)	916
	3925	3360	
Self-esteem in 1980	3.02	3.11***	92
	(.01)	(.01)	900
	2935	3583	

Variable	Females	Males	Number of Strata and PSUs
Occupational status expected by age 30	62.46	62.91	92
	(.51)	(.47)	920
	3982	3506	
Expected to marry >= age 24	.38	.58***	92
or never expect to marry	(.01)	(.01)	905
(1 = yes 0 = no)	3461	3080	
Expected to have a child >= age 26	.39	.55***	92
or never expect to child	(.01)	(.01)	900
(1 = yes 0 = no)	3458	2998	
Experienced a teen birth	.06	.02***	92
(1 = yes 0 = no)	(.00)	(.00)	923
	4064	3605	
Residentially independent by 1992	.86	.79***	92
(1 = independent 0 = dependent)	(.01)	(.01)	923
	4056	3600	
Union formation by 1992	.70	.55***	92
(1 = yes 0 = no)	(.01)	(.01)	921
	3925	3506	
Parental status by 1992	.56	.41***	92
(1 = child 0 = no child)	(.01)	(.01)	921
	3925	3506	
Occupational status in 1992	47.25	46.79	92
	(.51)	(.56)	922
	3907	3563	

*p < .05 ** p < .01 *** p < .001
Means and standard errors are weighted by participation in all five waves of the study.
Standard errors are in parentheses. Number of observations are listed below standard errors.

Table 4.2. Parents' College Expectations for Child in 1980 by Sex

College Expectations for Child	Females	Males	Total
Neither	470,000	600,000	1,100,000
	30.91%	40.71%	35.73%
One parent	250,000	200,000	440,000
	16.27%	13.22%	14.77%
Both parents	810,000	680,000	1,500,000
	52.82%	46.06%	49.50%
Total	1,500,000	1,500,000	3,000,000
	100%	100%	100%

Note: Cell counts are weighted and rounded.

Pearson design based F (1.99, 1655.92) = 23.48 Pr = 0.000

Table 4.3. Parents' Monitoring of School Progress in 1980 by Sex

Monitoring of School Progress	Females	Males	Total
Neither	160,000	140,000	310,000
	10.88%	10.12%	10.51%
One parent	340,000	300,000	640,000
	22.62%	21.18%	21.92%
Both parents	1,000,000	980,000	2,000,000
	66.5%	68.7%	67.57%
Total	1,500,000	1,400,000	2,900,000
	100%	100%	100%

Note: Cell counts are weighted and rounded.

Pearson design based F (1.98, 1645.28) = 1.32 Pr = 0.27

Table 4.4. Respondent's Educational Expectations in 1982 by Sex

Level of Education Expected	Females	Males	Total
< HS diploma	37,000	37,000	74,000
	2.63%	2.89%	2.71%
HS diploma	220,000	290,000	510,000
	16.0%	21.59%	18.75%
< 2 year degree	130,000	100,000	230,000
	9.23%	7.6%	8.4%
2 year degree	150,000	180,000	330,000
	10.88%	13.46%	12.15%
< 2 years of college	42,000	30,000	71,000
	2.98%	2.21%	2.6%
2 + years of college	240,000	170,000	410,000
	17.35%	12.57%	15%
Bachelor's degree	330,000	300,000	620,000
	23.36%	22.19%	22.78%
Master's degree	150,000	140,000	290,000
	10.61%	10.55%	10.58%
Ph.D./M.D.	97,000	95,000	190,000
	6.95%	7.05%	7%
Total	1,400,000	1,300,000	2,700,000
	100%	100%	100%

Note: Cell counts are weighted and rounded. As a result, some cells do not sum to the total.

Pearson design based F (7.83, 644.53) = 6.12 Pr = 0.000

Table 4.5. Educational Attainment in 1992 by Sex

Highest Degree Completed	Females	Males	Total
Less than HS diploma	79,000	110,000	190,000
	5.17%	7.68%	6.40%
HS diploma	720,000	710,000	1,400,000
	47.66%	48.74%	48.19%
Certificate	170,000	130,000	300,000
	11.04%	8.78%	9.93%
Associate's degree	150,000	98,000	250,000
	9.73%	6.70%	8.24%
Bachelor's degree	340,000	350,000	690,000
	22.63%	23.73%	23.17%
Advanced degree	57,000	64,000	120,000
	3.78%	4.38%	4.07%
Totals	1,500,000	1,500,000	3,000,000
	100%	100%	100%

Note: Cell counts are weighted and rounded.

Pearson design based F (4.83, 4013.92) = 6.99 Pr = 0.000

CHAPTER 5

THE GENDERED DECISION MAKING PROCESS

Whether and when to marry and have children, how far to go in school, and what kind of work to pursue are inter-related decisions that become particularly important as one nears the end of high school. Previous research suggests that adolescents determine their expectations based on labor market conditions, family resources, and opportunities that seem within their reach. A large body of research also indicates that adolescent girls and boys have different expectations regarding these activities. Historically, family formation expectations and labor force participation plans have been inter-related for women.

If all social processes are gendered, then the formulation of plans for the future should reflect this. The literature on gender provides little information about whether and how these plans are differentially determined for adolescent girls and boys. I fill this gap by answering two questions in this chapter. Are adolescent girls' and boys' expectations similarly influenced by social context? Are their expectations inter-related in the same way? If not, I argue that this provides evidence that the decision making process is gendered.

To answer these questions, I establish hypotheses about the potential relation between sex, labor market conditions, school context, family context, and plans for the future. The model I test is depicted by Figure 4.1 located in the previous chapter. In the

first section of this chapter, I discuss the estimation techniques unique to simultaneous equation models. In the remaining sections, I discuss the hypotheses related to each of the equations, present my analysis, and interpret the findings. I discuss them in the following order: educational, occupational, age at first marriage, and age at first birth expectations. In the last section, I summarize the findings.

Plans for the Future as Simultaneous Decisions

In Chapters 2 and 4, I suggested that educational expectations, occupational expectations, the age at which a first birth is expected, and the age at which a first marriage is expected are plans that influence each other. I also posit that the inter-dependence of these plans is different for adolescent girls and boys. When two or more of these plans influence each other and we assume that they occur "at the same time," ordinary least squares regression is inappropriate.[45] Instead, I use two stage least squares estimation to determine the effects of the plans on each other. Labor market conditions, school context, and family context may also have a different effect on the decision making process for adolescent girls and boys. To establish identification restrictions, I need to specify which aspects of social context have a direct effect on these plans. I discuss this in more detail shortly. For now, I describe the estimation procedures for two stage least squares regression.

This estimation technique proceeds in two steps. First, I regress an endogenous variable on all the exogenous variables from the four equations, one equation for each plan. This first stage is the reduced form equation and depicts the total effects of the

[45] If plans can be ordered so that they are endogenous but not reciprocal and if we can assume that the error terms across equations are not correlated, then a hierarchical recursive model can be constructed and ordinary least squares regression can be used to estimate the parameters. However, when the models are

exogenous variables on the endogenous variable. For example, Equation 5.1 shows the effects of all twenty-six exogenous variables used in the system to predict age at first birth expectations. See the Appendix for the specific equations and definitions of the variables involved. The Appendix also includes the reduced form regression results for each endogenous variable and the Chow test of model equivalence.

[Equation 5.1] $Y_3 = \alpha + \gamma_1 X_1 + \gamma_2 X_2 + \ldots + \gamma_{25} X_{25} + \gamma_{26} X_{26} + U_1$

The predicted values obtained for the endogenous variable are substituted in the second stage equation in which the new (instrumental) variable serves as an "independent" variable along with the exogenous variables that have a direct effect on the dependent variable of interest. This procedure is repeated for every endogenous variable in the equation. I use the predicted values of the endogenous variable to purge the correlation between the error term in the second stage equation and the endogenous variable.[46]

The second stage equation is the structural equation. Regressing the dependent variable of interest on the instrumental and exogenous variables enables me to obtain consistent parameter estimates. In other words, I am able to determine both the effects of the "problem" (endogenous) variable, which is related to the dependent variable under investigation, and the exogenous variables.[47] For example, Equation 5.2 is the structural equation predicting expected age at first marriage. It shows the influence of the instrumental variable taking the place of the expected age at first birth variable and the

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non-recursive (reciprocal), ordinary least squares regression leads to biased and inconsistent estimates of the parameters.

[46] This property applies to large samples. In small samples, the "new" instrumental variables may continue to be correlated with the error term. See Hanushek and Jackson (1977) for more information.

[47] Stata, as with many other statistical software packages, estimates these linear equations in a single step although the logic is the same. This eliminates the need to adjust the standard errors and R^2 values in the second stage. If the two stage estimation is done manually, the standard errors and R^2 values in the second stage are incorrect. Bootstrapping the standard errors of the parameters is one strategy for obtaining a reliable estimate of the parameters and their standard errors.

exogenous variables that directly affect expected age at first marriage as well as the error term.

[Equation 5.2] $$Y_4 = \alpha + \beta_3\hat{Y}_3 + \gamma_1X_1 + \gamma_9X_9 + \gamma_{10}X_{10} + \gamma_{11}X_{11} + \gamma_{12}X_{12} + \gamma_{13}X_{13} + \gamma_{14}X_{14} + \gamma_{15}X_{15} + \gamma_{17}X_{17} + \gamma_{21}X_{21} + \gamma_{23}X_{23} + \gamma_{24}X_{24} + \gamma_{25}X_{25} + U_1$$

Before estimation occurs, each structural equation must be evaluated to determine whether unique solutions can be obtained for each parameter. In other words, is there a unique value for each regression coefficient? Or, would estimation lead to many possible solutions? To determine this, I start by specifying which variables have a direct effect on the dependent variable in the structural equation and which variables operate indirectly through the endogenous variable from the first stage regression. Variables that have an indirect effect are not included in the second stage equation. In chapter 4, I introduced some of these restrictions. Once these equations have been created, I test each to ensure that they meet the order and rank conditions of identification. These conditions determine whether the equation is "short of information" (under identified), has sufficient information (just identified), or has too much information/too many restrictions (over identified) to yield unique parameter estimates. The latter case is not a problem because two stage least squares regression is capable of providing consistent estimates under these conditions. Yet, changing the restrictions in over identified models leads to different parameter estimates (Berry 1984, p. 27). Therefore, it is very important to correctly specify the model.[48]

Ideally, substantive theory should be specific enough to inform the restrictions that need to be imposed. Unfortunately, our current gender theories provide little

information regarding the decision making processes of adolescents. Instead, I present a set of hypotheses in the subsequent sections to describe how social context may influence these expectations. I use my empirical findings to answer the question: Is the influence of social context different for adolescent girls and boys? With information on the reciprocal relations between actual family formation and women's socio-economic outcomes (Marini 1978b, 1980, 1984c), I argue that expectations may follow a similar pattern especially if adolescent girls are cognizant of these constraints.[49] I impose the same model on adolescent boys' expectations. In the following sections, I describe the restrictions that I place on each equation. All equations as specified in the Appendix meet the rank and order conditions of identification.

To determine whether the factors in the model have a different effect for adolescent girls and boys, I perform the regression analysis separately by subgroup (females and males). I compare the results by examining the significance levels of the hypothesis tests associated with each regression coefficient. If the test is statistically significant for one group and not for the other, I note it in bold. I also test the regression coefficients to determine whether the effect is significantly different for girls and boys. This is noted by underlining the coefficients according to the convention discussed in Chapter 4. Finding a significant difference indicates that the effect of the variable is different for females and males. The test of model equivalence on the reduced form equations provides a further test of whether the process is gendered.

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[48] Imposing an incorrect restriction (such as dropping a relevant variable) leads to biased estimates. Failing to impose a correct restriction (such as including a relevant variable) leads to inefficient parameter estimates. I thank Karen Smith Conway for this insight.

[49] Clearly, this is an assumption on my part. Sidel (1990) indicates that adolescent girls consider the relation between socio-economic and family formation outcomes as they determine their plans. However, many young women believe that they can "do it all" in spite of what they may witness at home or in the

Recall that the students reported these plans for the future when the majority was 18 years of age and in their senior year of high school. This analysis does not include students who reported that they had a child or were married by 1982 (the year these expectations were reported). Although the analyses in this chapter are exploratory, they will provide information about the gendered nature of the decision making process and I use them to elaborate gender theory in Chapter 9.

Educational Expectations

Of all the plans for the future, I assert that educational expectations are most sensitive to school context and parental educational background. Specifically, I hypothesize that students will have higher educational expectations when they attend high socio-economic status (SES) schools, schools with very involved parents, and Catholic or private schools. Each of these represents characteristics of "high quality" schools that typically value education and encourage students to pursue college. I also predict that students with support to attend college will have higher educational expectations. This may derive from teachers' expectations that the student will attend college, best friend's plans to attend college, or parents' encouragement to attend college.

The location of the school may also matter. I hypothesize that students from urban and suburban schools will have higher educational expectations compared with students who attend rural schools because they have more schooling opportunities in their area. Exposure to these schools may prompt students to consider attending college. Labor market conditions also affect educational expectations. When unemployment is high, students expect to "wait out" the bad economy by attending college. I have no a priori

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work place. Thus, their plans may not reflect the sequencing that women from earlier cohorts report (Waite and Stolzenberg 1976).

reason to assume that region will directly affect educational expectations since institutions of higher education are "equally dispersed" throughout. I also make no assumptions about the direct effect of the racial and sex composition of the student body or the student/teacher ratio on respondent's educational expectations.[50]

I hypothesize that family socio-economic status will influence a child's educational expectations. I test whether "wealthier" parents are more likely to have children who plan to pursue additional schooling. And, I examine whether parents' educational level sets precedence for child's educational expectations. If role modeling is determined by sex alone, then mother's educational level should predict adolescent girls' educational expectations, but not adolescent boys' educational expectations. The same pattern should hold for father's educational level and adolescent boys' educational expectations.

I hypothesize that close monitoring of school progress will have a positive effect on educational expectations. Finally, there are several student characteristics and experiences that may impact educational expectations: academic achievement, discipline problems in school, and race.[51] I suggest that students who are doing well in school expect to further their education beyond high school whereas students who are having academic or behavioral problems leave early or expect to terminate their education at high school graduation. I include race as an exogenous variable because it differentiates adolescent girls' and boys' plans. I include these as controls. I have no reason to assume

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[50] Excluding variables from the equation is one way to impose restrictions and identify the equation. Although these restrictions are subject to debate, we need to ask whether excluding them from the equation leads to a serious misspecification of the model. If not, then the model stands until it is empirically proven to be inaccurate.

[51] Quite possibly, academic achievement and discipline problems in school are endogenous even though I treat them as exogenous and they are measured two years before the expectations. If these "decisions" are

that living in a single parent family, general supervision, or the number of siblings has a direct effect on educational plans. Instead, I argue that they influence educational plans through family formation plans.

In Chapter 4, I claimed that occupational expectations and the age at which a first birth is expected affect a student's educational expectations. Deciding on a career sets a "lower bound" on the amount of education one needs. I also hypothesize that family formation expectations will be positively associated with educational expectations for adolescent girls. This derives from the positive association found in the literature between the *actual* timing of childbearing and educational attainment for women. Expecting a child later increases expected educational attainment. I do not anticipate that the expected age at first birth will affect adolescent boys' educational expectations since men's *actual* socio-economic achievements are unaffected by the timing of family formation according to the literature.

The age at which a first child is expected is the only factor that I explicitly expect to have a different effect on adolescent girls' and boys' educational expectations. Whether sex interacts with the remaining variables is an empirical question that I answer.

Table 5.1 shows the results of the two stage least squares regression of educational expectations on aspects of school, family, and labor market conditions as well as the sets of expectations and individual level controls. The model explains 57% of the variance in adolescent boys' educational expectations and 37% of the variance in adolescent girls' educational expectations. From this, I conclude that the model is a better predictor of adolescent boys' educational expectations.

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related to the unmeasured factors that influence plans for the future, then my parameter estimates are biased.

Examining the regression coefficients and associated significance levels, I find that the status of the job that adolescent girls expect to have by age 30 was positively related to their educational expectations. Occupational expectations had no effect for adolescent boys. Adolescent girls may be thinking ahead, planning their careers, and determining the amount of education they need to achieve those goals whereas adolescent boys may be less planful. Contrary to what I hypothesized, the age at which adolescent girls expected their first birth was not related to their educational plans. In other words, neither adolescent girls nor boys anticipated that early (or late) childbearing would influence the amount of education they completed. Perhaps both adolescent girls and boys think that they can combine the two roles without interference. Or, the expected sequencing of these roles may no longer conform to the norm of school completion then childbearing. The reduced form model for expected age at first birth, which is located in the Appendix, suggests that the predictors of this variable were weak (see the R^2 value). Thus, this instrument is a poor replacement for the age at which a first birth is expected and it becomes a poor predictor of educational expectations.

Labor market conditions also had no effect on educational expectations net of other factors. School and family contexts were significantly related to girls' and boys' educational plans. Adolescent boys were more likely to be influenced by their best friend's plans to attend college than adolescent girls were. I also find that girls from urban schools had lower educational expectations than girls from rural schools. Community type (urbanicity) had no effect for adolescent boys. The statistical test on the regression coefficients indicates that living in an urban area was more detrimental to girls' educational plans than to boys' plans.

Parents' educational level does not conform to the same sex role modeling hypothesis. Rather, *both* adolescent girls' and boys' expected level of education increased as mother's educational level increased. However, adolescent boys' expected level of education was positively related to father's educational level. This was not true for girls. Adolescent boys appear to have benefited from having a well-educated father in ways that adolescent girls did not. Parents' encouragement to attend college had a positive effect for adolescent girls and boys. Yet, its influence was significantly greater for boys.

The individual level factors that I included as controls were also related to educational expectations. Black youth had higher educational expectations than White youth controlling for other factors. The test of the regression coefficients for academic achievement suggests that it had a greater effect for adolescent boys relative to adolescent girls. In other words, doing well academically had no effect on adolescent girls' educational plans whereas doing well academically increased the amount of schooling boys expected to complete net of other factors.

Overall, adolescent boys' educational plans appear to get a greater boost from personal support than adolescent girls' plans. Peer, teacher, and parental support have a positive effect on boys' educational plans net of other factors. At the bivariate level, I found that boys had less parental support to attend college relative to girls. Yet, when that support exists, boys convert it into higher educational attainment expectations than girls. Although some have argued that girls are more relational than boys, these findings suggest otherwise. Boys benefit more from support and encouragement to attend college.

In addition, the results in this section indicate that living in an urban versus a rural community is more detrimental to girls' educational plans than it is to boys' plans.

Perhaps girls from rural areas realize that in order to leave their communities (and the limited opportunities that exist there) they will need to aspire to exceptionally high levels of educational attainment. In contrast, adolescent boys may perceive more opportunities regardless of their community type. As a result, their community would have less of an effect on their educational plans.

The Chow test of model equivalence for the reduced form model (Table A-4 in the Appendix) suggests that social context and other factors had a similar effect on adolescent girls' and boys' educational plans. Although the process of formulating educational plans may be similar, the Goldfeld Quandt test indicates that the subgroup variances were not equal. The latter test implies that the unmeasured factors related to educational plans vary by sex. The differential effects among the regression coefficients and the Goldfeld Quandt test provide evidence that the development of educational plans is gendered. The Chow test appears to contradict this.

Table 5.1. Two Stage Least Squares Estimation of Educational Expectations on Social Context and Expectations by Sex

	Females	Males
Occupational status expectations	.073***	.016
	(.018)	(.033)
Expected age at first birth	.075	-.092
	(.118)	(.254)
Race (1 = Black)	.582*	.780**
	(.288)	(.297)
Academic achievement	.009	.028***
	(.005)	(.006)
Discipline problems in school	-.379	-.049
(1 = yes)	(.211)	(.154)
Labor Market Conditions		
County unemployment, 1982	-.002	.012
	(.013)	(.015)
School Context		
Average SES	.011	.282
	(.234)	(.318)
Avg. parental participation	.067	.092
	(.116)	(.148)
Teachers' encouragement to attend	.250*	.220*
college (1 = yes)	(.106)	(.100)
Best friend plans to attend college	.230	.635*
(1 = yes)	(.161)	(.277)
Catholic	.213	.146
	(.145)	(.145)
Private	-.086	-.376
	(.261)	(.362)
Urban	-.450*	.051
	(.178)	(.194)
Suburban	-.066	.215
	(.119)	(.153)
Family Context		
Family SES	.005	.005
	(.003)	(.004)
Mother's education	.070*	.082**
	(.030)	(.029)
Father's education	.044	.073*
	(.028)	(.032)
Parents' encouragement to attend	.253*	.640***
college	(.103)	(.142)
Parental school monitoring	.089	-.004
	(.082)	(.084)
Constant	-1.91	1.26
	(1.04)	(2.21)
R^2	.37	.57
F	57.62	126.09
	(19, 2263)	(19, 1862)
	p < .001	p < .001
N	2283	1882

*p < .05 **p < .01 ***p < .001 Note: All standard errors are robust estimates calculated using Taylor series linearization approximations.

Occupational Expectations

If occupational and educational plans are made simultaneously, then I expect that educational plans will have a positive effect on the status of the job that an adolescent expects to have by age 30. As noted in Chapter 4, I do not expect family formation expectations to influence occupational plans directly. Rather, I hypothesize that expected age at first birth will influence these plans indirectly through educational plans. And, the expected age at first marriage will influence occupational plans indirectly through expected age at first birth. For these reasons, I do not include them in this model.[52] Instead, I hypothesize that socio-economic composition of the school, and the type of school that a student attends will have a positive effect on occupational plans. As discussed earlier, students from high SES, Catholic, or private schools may be "groomed" to expect to enter professional occupations. This is especially true in the case of private or high SES schools where many of the students' parents are likely to be professionals.

I exclude average parental involvement, teachers' encouragement, and best friend's educational plans from the equation assuming that they have no direct effect on occupational expectations. I also exclude the race and sex composition of the student body. Some argue that peers influence fertility behavior and high school completion (e.g., Evans, Oates and Schwab 1992). To assert that girls and Blacks as groups influence occupational expectations, we would need to find a consistent difference in their occupational plans. The literature provides little evidence that Blacks expect to obtain lower (or higher) status jobs than Whites; however, Marini and Greenberger (1978) find

[52] In analysis that is not presented here, I included the age at which a first birth was expected as a predictor of occupational status expectations along with the other predictors of occupational status expectations. The analysis indicated that this variable had no effect on adolescents' occupational status expectations net of other factors.

that adolescent girls expect to obtain jobs of lower prestige compared with the jobs that adolescent boys expect. Nevertheless, the difference they find is less than two points on the NORC prestige scale. Substantively this is meaningless. In Chapter 4, I concluded that there was no difference in the status of the jobs adolescent girls and boys expected. Given the lack of strong evidence in favor of subgroup differences in occupational expectations, I exclude race and sex composition of the student body as predictors.

I exclude the ratio of students to teachers as well. There is no reason to believe that attending a school with greater supervision (smaller students/teacher ratio) would influence a student's occupational plans. I also assume that labor market conditions affect occupational expectations through educational expectations. Therefore, I do not include them in the model.

I hypothesize that the region of the country will affect occupational expectations. During the 1980s, high tech industries were located in the northeast and western regions of the United States. Students from these areas might be more likely to aspire to (and expect) these kinds of jobs.[53] Since many companies moved from urban areas to the suburbs, I test whether students from the city expect fewer (and lower status) job opportunities relative to youth from other areas. However, if youth expect to leave urban areas after high school graduation, this may be less relevant. I also hypothesize that family socio-economic status will have a significant effect for both young women and men. Youth from "wealthier" families have higher occupational expectations in keeping with their parents' example. Other aspects of family context are excluded from the model. I assume that parents' educational level affects occupational expectations through

educational expectations. And, I have no reason to believe that parental monitoring, family structure, or the number of siblings has a direct effect on occupational expectations. Whether the factors included in the model affect young women and men differently remains to be determined by my empirical findings. As controls, I include academic achievement, race, and discipline problems in school.

Table 5.2 shows the results from the two stage least squares regression of occupational status expectations on educational expectations, aspects of social context, and individual controls. The model provides a better explanation of adolescent boys' occupational expectations by explaining 40% of the variance for boys and 30% of the variance for girls. School and family contexts had a negligible impact on adolescent girls' and boys' occupational expectations. Nonetheless, educational expectations were significantly related to occupational plans for both adolescent girls and boys. Youth who expected to further their education expected to obtain higher status jobs as adults.

Contrary to what I expected, adolescent boys who attended Catholic schools had *lower* occupational status expectations than boys from public schools. School type had no effect on girls' occupational expectations. In addition, girls from urban areas had *higher* occupational status expectations than girls from rural areas. This positive association is the opposite of what I found for educational expectations.

I also conclude that adolescent boys who reported discipline problems in school had lower occupational status expectations than boys who did not report discipline problems in school. This had no effect on adolescent girls' status expectations. None of these factors had a significantly different effect on adolescent girls' and boys'

[53] However, jobs in high tech industries reflect the full range of occupational status scores from assembler to Corporate Executive Officer. Consequently, this variable, as a proxy for the types of jobs available

occupational status expectations. In other words, these aspects of social context and individual experiences had a similar effect for girls and boys. This was supported by the Chow test (see Table A-5) which indicates that the development of occupational plans was similar for adolescent girls and boys. Nonetheless, the Goldfeld Quandt test suggests that the relation between occupational plans and the unmeasured factors was not the same for adolescent girls and boys. Several variables significantly lowered boys' occupational expectations (discipline problems and Catholic school attendance), but had no effect on girls' expectations. Urban residence had an effect on girls' occupational plans but no effect for boys. Although educational and occupational plans were inter-dependent for girls only, the remaining evidence does not lead to a definitive conclusion about whether the development of occupational plans is gendered.

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locally may be a weak predictor.

Table 5.2. Two Stage Least Squares Estimation of Occupational Expectations on Social Context and Educational Expectations by Sex

	Females	Males
Educational expectations	6.94***	5.78***
	(.755)	(.568)
Race (1 = Black)	1.18	3.79
	(2.28)	(2.21)
Academic achievement	.036	.014
	(.032)	(.030)
Discipline problems in	.587	**-2.67***
school (1 = yes)	(2.05)	**(1.21)**
School Context		
Average SES	.721	-.224
	(1.95)	(1.47)
Catholic	-1.60	**-2.15***
	(1.31)	**(.989)**
Private	.109	-3.71
	(2.62)	(3.13)
Urban	**5.56*****	2.36
	(1.68)	(1.44)
Suburban	1.28	1.41
	(1.22)	(1.03)
New England/Mid Atlantic	.390	.403
	(1.39)	(1.20)
Central	-.097	.030
	(1.30)	(1.15)
Mountain/Pacific	-1.30	-1.52
	(1.84)	(1.57)
Family Context		
Family SES	-.046	.007
	(.031)	(.022)
Constant	24.71***	32.32***
	(2.81)	(2.06)
R^2	.30	.40
F	34.37	53.36
	(13, 2565)	(13, 2155)
	p < .001	p < .001
N	2579	2169

*p < .05 **p < .01 ***p < .001 Note: All standard errors are robust estimates calculated using Taylor series linearization approximations.

Expected Age at First Marriage

If family formation plans are inter-related, I expect that the age at which an adolescent expects a first birth will have a positive effect on the age she or he expects to marry. Previous research suggests that Blacks marry later than Whites. As a result, I hypothesize that the marital timing expectations of adolescents will reflect these racial differences. Similarly, I test the hypothesis that attending a school with a high proportion of Black students will delay the age expected to marry. I also hypothesize that attending a school with a high proportion of female students will reduce the age expected to marry. If peer groups shape school norms, then attending a school with a high proportion of Blacks would increase the age at which first marriage is expected. The opposite would be true for students attending a school with a high proportion of female students. This is a variation on Crane's (1991) epidemic theory and Evans, Oates, and Schwab's (1992) peer group effect. I also include region and urbanicity as predictors because actual marriage rates differ across these areas (Goldscheider and Waite 1986).

I exclude other aspects of school context: average parental involvement, school SES, ratio of students to teachers, school type, teachers' encouragement, and friend's plans to attend college. I argue that these influence the age at which first marriage is expected by affecting the other expectations. I exclude labor market conditions for the same reason.

I hypothesize that youth from higher socio-economic status families will expect to marry later because their parents encourage delayed family formation and the pursuit of other opportunities such as schooling and a career. Previous research suggests that residing in a single parent family had no effect on expected age at first marriage. I

include this variable to determine if this finding holds when family formation plans are made jointly. Given research suggesting that an increase in the number of siblings prompts early entrance into marriage for White women but not for men of any race, I include this variable to investigate whether it has a differential effect on the expected age at first marriage. I exclude measures of parents' educational level, educational expectations, and monitoring of school progress assuming that they have no direct effect on marital timing plans. I also expect general supervision to influence marital timing plans through the age at which a first birth is expected. As controls, I include academic achievement and discipline problems in school.

Table 5.3 shows the results from the two stage least squares regression of the age at which first marriage is expected on expected timing of childbearing, social context, and individual level factors. This model explains 65% of the variance in adolescent boys' marital timing expectations and 57% of the variance in adolescent girls' marital timing expectations. The model is a better predictor of adolescent boys' marital timing expectations.

When I consider the effect of the expected timing of childbearing on the expected timing of marriage, I find that it had a positive effect for adolescent girls and boys. In other words, the later a first child was expected, the later first marriage was expected to occur. This was true for both groups. Race had the anticipated effect. Blacks expected to marry later than Whites regardless of sex. However, peer effects were not evident in the manner than I anticipated. Neither aspect of school context influenced the expected timing of marriage net of other factors. Adolescent girls from the other regions expected

to marry later than girls from the South although region did not have a significantly different effect on girls' and boys' expectations.

Family socio-economic status affected only adolescent boys' expected timing of marriage and had the delaying influence that I hypothesized. Adolescent boys from high SES families may plan to complete college and secure a stable job before marrying whereas the "wealth" of adolescent girls' families did not affect when they planned to marry.

Marital timing plans were related to the expecting timing of childbearing for both young women and men. Yet, social context and other factors did not have a significantly different effect when I tested the pairs of regression coefficients.[54] Nevertheless, the Chow test in Table A-6 suggests that the process associated with marital timing plans was gendered. This is the only model in which the error variances were equal (see the Goldfeld Quandt test). Thus, the unmeasured factors were similarly related to girls' and boys' marital timing plans.

[54] Living in a suburban area had a different effect on adolescent girls' and boys' expected timing of marriage. However, it was not a significant predictor of these expectations. In cases like this, I refrain from interpreting the differential effect because its meaning is ambiguous.

Table 5.3. Two Stage Least Squares Estimation of Age at First Marriage Expectations on Social Context and Age at First Birth Expectations by Sex

	Females	Males
Expected age at first birth	1.02***	.821***
	(.118)	(.108)
Race (1 = Black)	1.41***	1.35***
	(.424)	(.390)
Academic achievement	-.004	-.001
	(.003)	(.002)
Discipline problems in	.237	.461***
school (1 = yes)	(.176)	(.143)
School Context		
% Black students	.006	.002
	(.005)	(.005)
% female students	.004	.005
	(.003)	(.003)
Urban	.102	.288
	(.174)	(.203)
Suburban	-.093	.224
	(.116)	(.116)
New England/Mid Atlantic	.372*	.421**
	(.155)	(.161)
Central	.459**	.180
	(.158)	(.159)
Mountain/Pacific	.425*	.079
	(.187)	(.191)
Family Context		
Family SES	.0004	.006*
	(.003)	(.003)
Single parent family	.048	.355
(1 = yes)	(.148)	(.182)
Number of siblings	.021	-.012
	(.022)	(.024)
Constant	-3.06**	-.428
	(1.01)	(1.12)
R^2	.57	.65
F	60.35	27.06
	(14, 2364)	(14, 2003)
	p < .001	p < .001
N	2379	2018

*p < .05 **p < .01 ***p < .001 Note: All standard errors are robust estimates calculated using Taylor series linearization approximations.

Expected Age at First Birth

I hypothesize that educational and occupational status expectations will influence the expected timing of childbearing because socio-economic achievements have been positively associated with delayed childbearing among women. If adolescent girls are cognizant of this, then it should be reflected in their expectations. According to this pattern, high educational and occupational expectations will delay the expected age at first birth among adolescent girls. I expect that adolescent boys' childbearing expectations will be unaffected by educational and occupational expectations because men have typically been able to combine these roles with fewer negative consequences. If marriage and childbearing are jointly decided, then I hypothesize that the expected timing of marriage will influence the expected timing of first birth for adolescent girls and boys.

I expect that Black youth will anticipate earlier childbearing than White youth since Blacks bear children at a younger age than Whites. I hypothesize that youth who are doing well in school have an incentive to delay childbearing and expect to do so whereas youth who report having problems in school become disillusioned and expect to bear children earlier. This might be especially true for adolescent girls since other forms of "rebellion" are not sex appropriate (e.g., criminal activities). These act as control variables.

I also hypothesize that the school sex and race composition will influence the age expected to bear children given the patterns of actual behavior that are associated with members of these groups. If women bear children earlier than men and Blacks bear children earlier than Whites, then increases in the percentage of Blacks (or women) create a type of peer pressure and decrease the age expected to bear children for individual

adolescent girls and boys. I propose that the ratio of students to teachers will lower the expected age at childbearing for a different reason. When there are fewer teachers per student, students may not receive the close attention from authority figures that reinforces social norms of delayed childbearing. Without close adult supervision, youth may pursue early childbearing especially if other pursuits (schooling and work) do not appear within their reach. I do not include labor market conditions in the model because I hypothesize that its influence is indirect through educational expectations. Likewise, I expect school composition and quality indicators (school SES, parental involvement, school type), teachers' encouragement to attend college, and best friend's plans to attend college to affect the timing of expected childbearing through educational expectations. I include regional indicators because residents of the South tend to bear children earlier than residents of other regions. I also assume that urban and rural residents expect to have a child earlier than suburban residents.

I anticipate that youth from high socio-economic families will expect to delay childbearing. Again, these youth plan to have children well after their careers are established. Finally, to test whether close parental supervision influences childbearing expectations, I include a measure of general supervision. Perhaps youth whose parents monitor their activities closely expect to have a child later. I exclude parents' educational levels, monitoring of school progress, and parents' educational expectations assuming that they have an indirect effect via educational expectations. I also exclude family structure and number of siblings hypothesizing that their influence is indirect through marital timing expectations.

Table 5.4 shows results of the two stage least squares estimation of age at which a first child is expected on socio-economic expectations, marital timing expectations, school context, family context, and individual level factors. The model explains 61% of the variation in girls' expectations and 56% of the variation in boys' expectations. I find that socio-economic plans do not predict expected age at first birth. The expected age at first marriage had a significantly different effect on girls' and boys' expected age at first birth. Specifically, delaying marriage one year delayed childbirth expectations by one year for males, but just over eight months for females. Contrary to the concern of some, childbearing decisions do not appear in danger of being separated from decisions about marriage. However, adolescent girls and boys do appear to have different expectations of how long they will wait before having children. This may reflect differences in gender role expectations: men should have a stable job before becoming fathers whereas women should become mothers shortly after marrying especially the longer they wait to marry. As hypothesized, Black youth expected to bear children earlier than White girls.

Region had an important effect on childbearing plans. Adolescent boys living in the New England/Mid-Atlantic region expected to have a child earlier than boys from the South. Adolescent girls living in the Central region expected to bear children earlier than girls from the South. Nonetheless, the regional effects were not significantly different for girls and boys.

The Chow test as depicted in Table A-7 suggests that the process associated with the timing of childbearing was different for adolescent girls and boys. The relation between these plans and the unmeasured factors also varied by sex. The differential effect of marital timing expectations provides further evidence that this process is gendered.

Table 5.4. Two Stage Least Squares Estimation of Age at First Birth Expectations on Social Context, Socio-Economic and Age at First Marriage Expectations by Sex

	Females	Males
Educational expectations	.277	-.122
	(.236)	(.185)
Occupational status	-.007	.013
expectations	(.027)	(.030)
Expected age at first marriage	.689***	1.04***
	(.128)	(.144)
Race (1 = Black)	-1.16*	-1.02*
	(.456)	(.464)
Academic achievement	.004	.005
	(.003)	(.004)
Discipline problems in school	.117	-.371
(1 = yes)	(.235)	(.191)
School Context		
% Black students	-.004	-.006
	(.005)	(.006)
% female students	-.003	-.001
	(.003)	(.004)
Log students/teacher	-.111	.146
	(.112)	(.163)
Urban	.055	-.424
	(.212)	(.232)
Suburban	.133	-.256
	(.111)	(.138)
New England	-.091	-.526**
	(.194)	(.204)
Central	-.415**	-.307
	(.138)	(.178)
Mountain	-.262	-.239
	(.198)	(.221)
Family Context		
Family SES	-.003	-.001
	(.004)	(.004)
General supervision	.165	.129
(1 = yes)	(.188)	(.156)
Constant	4.42***	1.11
	(1.05)	(1.29)
R^2	.61	.56
F	52.67	19.71
	(16, 2211)	(16, 1850)
	p < .001	p < .001
N	2228	1867

*p < .05 **p < .01 ***p < .001 Note: All standard errors are robust estimates calculated using Taylor series linearization approximations.

Summary

The findings in this chapter advance our understanding of the relation between gender and plans for the future. Specifically, I conclude that plans for the future were important predictors as sets of related factors. Socio-economic plans were more likely to be inter-related for girls whereas family formation plans were reciprocally related for both girls and boys. Although adolescent girls consider educational and occupational plans jointly, adolescent boys have significantly different expectations compared with girls regarding how long to wait after marriage before becoming a parent. This difference in the inter-dependence of plans indicates that girls and boys have different expectations about the timing of family formation and the relation between educational and occupational achievement.

At the outset of the chapter, I hypothesized that socio-economic plans and the expected timing of first birth would be inter-dependent for adolescent girls. This was not the case. I argue that when adolescent girls think about the future, they are unaware of the real constraints that childbearing places on women's socio-economic achievements and continue to believe that they can "do it all." Adjustments to their educational and career goals may take place after the birth of their first child. As anticipated, socio-economic plans had no impact on adolescent boys' family formation expectations nor did family formation expectations affect their socio-economic plans. Adolescent boys may take for granted the fluidity with which men combine these roles.

There is an alternate explanation for this lack of inter-dependence. Weak instrumental variables are poor predictors. The reduced form equations for family formation plans suggest that the instruments for family formation plans are not strong

replacements and may attenuate the association between family formation and socio-economic plans. Future research needs to focus on identifying better instrumental variables for these plans.

The tests of model equivalence for the reduced form equations indicate that the development of family formation plans is gendered whereas the development of socio-economic plans is more similar for girls and boys. How do we explain this? Schools and families may no longer privilege adolescent boys relative to adolescent girls as they develop their socio-economic plans. This may result from legislation that prohibits sex discrimination that creates an aura of "equal opportunity" in the minds of adolescent girls while placing real checks on the benefits that social context provides.

However, there are several gender differences that bear mentioning. Adolescent girls from urban as opposed to rural areas had significantly lower educational expectations compared with adolescent boys. Possibly, the same schooling opportunities that urban girls appreciate prompt rural girls to set higher educational expectations for themselves to escape the confines of their communities. Community type had no effect for young men. This may indicate that the educational constraints (and opportunities) *young men* face are similar across communities.

Living in an urban area appears to increase girls' occupational status plans while having no effect on boys' plans. How do we explain this? Girls from urban areas may perceive that there are more and a greater variety of jobs whereas rural girls perceive fewer opportunities. Again, the lack of community influence on boys' plans suggests that perceived (and real) opportunities do not vary for boys in the way that they do for girls.

In other words, across communities, there may be more job opportunities for men than for women.

I also find that adolescent boys' plans were more sensitive to parents' encouragement to attend college than girls' plans were after controlling for teacher and peer support to attend college. Girls are frequently described as being more relational and more sensitive to others' needs and pursuits. However, my findings suggest that in terms of educational plans, adolescent *boys* are more "relational." To put it differently, adolescent boys may need extra support in order to pursue higher education, and parental encouragement is an effective source of that support for young men. Or, boys may be more susceptible to parents' influence and this is one indication of that vulnerability. Nonetheless, boys seem to benefit more from their parents' encouragement to attend college than girls do.

The greater influence of academic achievement on boys' educational plans suggests that they expect greater educational opportunities relative to girls who excel academically. Adolescent boys who do well in school may expect to be rewarded for their exceptional abilities whereas girls who do well may anticipate "blocked" opportunities in spite of their intelligence merely because they are women. Since academic achievement had no effect on family formation plans, I conclude that academic success does not cause girls to expect a delay in family formation. Put differently, girls who excel academically do not expect to exchange family for additional schooling.

The gendering of family formation plans implies that these expectations are not only more sensitive to the influence of social context and other factors, but also the last bastion of gender inequality. As mentioned in Chapter 4, adolescent girls expected to

marry and have children earlier than adolescent boys. The gendering of these expectations results from the influence of race, where the adolescents live, discipline problems in school, and when they expect to enter the other family role (parent or spouse). The question is, does it matter? To the extent that plans influence behavior, then these factors may play an important role in hastening (or delaying) actual family formation. To the extent that early family formation limits women's socio-economic achievements, these factors also become important because they perpetuate gender inequality. Further research is necessary to investigate these linkages.

Finally, two aspects of social context had unusually poor predictive power given the attention they receive in the literature: labor market conditions and family socio-economic status. I hypothesized that labor market conditions would exert a direct influence on educational expectations and affect the other plans indirectly through educational expectations. Their lack of influence may indicate that adolescents are not as rational as the literature portrays them. On the other hand, they may not recognize that poor economic conditions with few immediate employment opportunities can be traded for the future gains associated with a college degree. Or, youth may gauge their opportunity costs against unemployment figures at the SMSA, state, or national level as opposed to the county level.

Family socio-economic status also had very little impact on children's plans for the future. When it was influential, it was important to boys' expected age at first marriage. In some respects, this is good news. Family "wealth" does not predispose adolescent girls or boys to particular socio-economic or family formation expectations (except as noted above). This suggest that anyone can "dream" and "plan" to achieve it.

However, it also serves as a warning. Youth who do not achieve what they planned may experience disappointment that can be destructive and alienating. Future research examining the strategies used to "cool out" young women who expect to "have it all" would be useful. Finally, an elaboration of gender theory is necessary to explicate this decision making process. In Chapter 9, I begin this elaboration.

Overall, my findings in this chapter indicate that girls' and boys' plans are not inter-dependent in the same way. The development of adolescent girls' and boys' plans for the future is gendered although social context and other factors do not have a consistent effect on these plans.

CHAPTER 6

GENDER, SOCIAL CONTEXT, AND ADULT STATUS OUTCOMES

If gender organizes the practices and policies of our social institutions and influences our social processes, then we would expect social context to have a different effect on women's and men's transition to adulthood. The question I seek to answer in this chapter is: Under what conditions does gender matter? I examine several paths to adult status. In the first section, I investigate the association between social context and teen childbearing among White youth. For some adolescents, becoming a parent early is the only way to achieve adult status because educational and career advancement opportunities are out of reach. Research on teen childbearing typically focuses on the experiences of adolescent girls. In this chapter, I determine which aspects of social context distinguish the experiences of teen mothers and fathers. Do White teen mothers and fathers come from similar backgrounds? Or, are their social environments different? Figure 4.2 provides a conceptual model for the descriptive analysis that follows.

In the second section, I focus on five transitions that are commonly associated with achieving adulthood. To determine when gender matters, I examine the extent to which labor market conditions, school context, and family context differentially affect these outcomes. Becoming a parent, entering into marriage or cohabitation, and residing independent of one's family of origin are indicators of achieving adult status in contemporary American society. As the stratification literature emphasizes, educational

attainment and occupational status attainment in early adulthood influence one's later socio-economic achievements and one's ability to achieve economic well-being. These are also crucial indicators of the transition to adulthood.

The models I test are depicted in Figure 4.3. I use reduced form equations to estimate the impact of these social contexts on the adult status outcomes. I perform regression analysis separately for women and men and include a pooled sample model for comparison purposes. As done in the previous chapter, I test the regression coefficients to determine if an effect is significantly different for women and men. I also conduct a test of model equivalence for each set of analyses to determine whether the process is significantly different for women and men. This section of the chapter examines the experiences of Black and White youth.

In the third section of this chapter, I explore whether gender differences in outcomes are attributable to differences in background resources or differential treatment. To do this, I substitute the means associated with women's resources in men's equations. I repeat this procedure and substitute men's means in women's equations. This technique simulates living under the conditions of the other sex and is a well-documented strategy for determining wage discrimination (Duncan 1969; Goldin 1990; Oaxaca 1973; Raymond, Sesnowitz, and Williams 1988). Keep in mind that the young adults in this sample were approximately 28 years of age when they reported achieving these adult status outcomes.

Teen Parenting

Social science research on teen childbearing focuses primarily on the experiences of adolescent girls. This literature suggests that girls from "impoverished" backgrounds

are more likely to become teen mothers. Girls' later accomplishments are seriously diminished when they bear children as adolescents and this is particularly true for White girls. The current policy debate takes a different approach focusing on the social cost of teen childbearing: increases in the welfare rolls and long-term dependency on governmental support. Out-of-wedlock childbearing among teens has become *the* social problem of the late twentieth century. In response, millions of dollars have been spent to prevent teen pregnancy. Social scientists and politicians recently acknowledged that targeting girls leaves fifty percent of the population's behaviors unchanged (Sonenstein 1998). Thus, a growing number of social programs are targeted at adolescent boys to encourage contraceptive use and paternal responsibility.

What we do not know is whether the factors that predict teen childbearing are the same for adolescent girls and boys. Are adolescent girls and boys similarly affected by the social context in which these decisions are made? Or, are some aspects more important as predictors for adolescent girls than for adolescent boys? Does teen parenting have the same effect on girls' and boys' later achievements?[55]

Although the High School and Beyond data set is well suited for studies of long term socio-economic achievements and later family formation, the data collected on adolescent sexual behavior, contraception, and fertility are sparse. The percentage of adolescents in this sample who had children by 1982, when the majority was eighteen, was small. Of the 7,669 respondents, only 313 had children by 1982. Two percent of adolescent boys were fathers and six percent of adolescent girls were mothers. A further breakdown of the sample indicates that 15 Black adolescent boys, 78 Black adolescent

girls, 55 White adolescent boys, and 165 White adolescent girls had a child by 1982. Of those who had children, 68% of teen mothers lived with their child whereas 36% of teen fathers lived with their child (χ^2 (1) = 24.28, $p < .001$ based on unweighted percentages).

The small number of teen parents makes model estimation impossible particularly for Blacks. Consequently, this section focuses on the contextual correlates of teen childbearing for White adolescents. In other words, are the background characteristics of White teen mothers and fathers the same? Or, do they have a different set of resources and experiences? I answer these questions and discuss implications for future research on female and male teen childbearing.

Based on the results in Table 6.1, I conclude that teen mothers and fathers attended similar schools and came from similar types of families; however, several differences are significant. Although none of these statistically significant factors suggests a "cause," they indicate the kinds of schools and families where we are more likely to find teen mothers relative to teen fathers. Teen mothers attended schools with a significantly higher percentage of Black faculty, a lower SES student body, and lower levels of parental involvement. Teen mothers were also more likely than teen fathers to attend schools in the South. In addition, teen mothers came from lower SES families and had mothers with less education relative to teen fathers. Yet, teen mothers received more parental monitoring of their school work and greater supervision than teen fathers. Teen

[55] I use teen childbearing and parenting interchangeably although it would be more accurate to say that the policy debate and the social science literature are concerned with teen parenting, not childbearing because most teen mothers do not relinquish their children after childbearing.

mothers also scored lower on the academic achievement test than teen fathers. However, teen fathers were far more likely to report discipline problems than teen mothers.[56]

With the exception of the level of parental involvement in the school and the greater likelihood of attending school in the South, these findings reflect the gender differences I found in the sample as a whole. Recall that from Chapter 4, adolescent girls attended lower SES schools and schools with a higher proportion of Black faculty. Adolescent girls also had mothers with lower levels of education, lived in lower SES families, were supervised more closely, and had their academic progress monitored more closely than adolescent boys. In other words, the findings in this chapter are not a condition of being a teen parent, but continue to bear out gender differences in adolescents' experiences.

On the other hand, the two exceptions and the higher incidence of reported discipline problems among teen fathers warrant further discussion. White teen mothers were more likely to reside in the South. Quite possibly, White Southern women bear children earlier than women in other regions. White Southern girls may believe that their educational and career opportunities are especially limited and choose early motherhood whereas White boys from the South may not perceive these same limitations. However, the findings from Chapter 5 suggest that the occupational expectations of Southern adolescent girls were no lower than the expectations of girls from other regions. Southern adolescent girls also expected to marry earlier than girls from other regions and expected to have children later than girls from the Central region (given expected age at first

[56] I examined whether self-esteem differentiated teen mothers and fathers. It did not; therefore, I eliminated it from the table of results presented here.

marriage). The South appears to create a unique culture that affects girls differently than boys.

The gender difference in the level of parental involvement in the school implies that teen mothers attend schools with less involved parents. Table 6.2 illustrates the influence of parental involvement in the school on the likelihood of having a child as a teen. The interaction term suggests that level of parental involvement in the school had a different impact on the likelihood that White adolescent girls and boys would become teen parents. Specifically, increases in the average level of parental involvement in the school decreased the chance that White girls would become teen mothers while having little effect on the likelihood that White boys would become teen fathers. Given the small number of participants who reported having children, these findings should be treated cautiously. There is another explanation for this association. Family socio-economic status may influence both the likelihood of becoming a teen parent and the average level of parental participation in the school. That is, "wealthier" parents may be more active in their daughter's school and may also discourage teen motherhood. These associations remain to be explored in a future paper.

The last difference, the association between sex, discipline problems, and teen childbearing is also noteworthy. Teen fathers were more likely to report having discipline problems in high school than teen mothers were. This suggests that behavior problems in school and early family formation are closely linked for adolescent boys. Boys who become disengaged in school may resort to fathering a child as a means of bolstering their feelings of self-worth. The relation between these factors is difficult to determine even though they are time ordered (discipline problems were measured in 1980 and teen

childbearing was reported as of 1982). A propensity for risk taking behavior may also be an underlying factor that increases the likelihood that boys will act out in school and become teen parents. Determining the exact relation requires a more substantial population of teen fathers and measures of risk taking behavior.

In sum, most of the gender differentiation that I found reflects differences in the larger sample and is not unique to teen parents. However, gender differences in the effects of region (the South in particular), aggregate level of parental participation in the high school, and discipline problems in school warrant closer examination. What makes living in the South "conducive" to teen motherhood for Whites? Why does parental participation in the high school seem to deter teen childbearing among White adolescent girls but not among White boys? Why do White adolescent boys with behavior problems appear more likely to become teen fathers? These are questions that the High School and Beyond data cannot answer. Exploring these associations and answering the questions posed earlier require data sets with detailed information about sex, social context, and fertility behavior. With this information, we can determine whether the process of becoming a teen parent is different for adolescent girls and boys.

Table 6.1. Descriptive Statistics and Sampling Design Information for White Teen Parents by Sex

Variable	Teen Mothers	Teen Fathers	Number of Strata and PSUs
Labor Market Conditions			
County unemployment rate, 1982	10.75	10.10	92
	(.47)	(.52)	923
	165	55	
School Context			
% Black faculty	6.69	3.46*	92
	(1.29)	(1.02)	842
	158	54	
% Black students	11.82	7.23	92
	(1.71)	(1.78)	873
	163	53	
% Female faculty	50.98	46.18	92
	(2.36)	(1.41)	892
	162	53	
% Female students	53.04	49.15	92
	(1.98)	(1.41)	892
	160	55	
Average school SES	-.25	-.11*	92
	(.03)	(.05)	923
	165	55	
Average parental participation in the school	.96	1.14*	92
	(.06)	(.08)	921
	164	55	
Log students/teacher	2.88	2.88	92
	(.05)	(.04)	842
	149	53	
Teachers' educational expectations of student (1 = college 0 = other)	.16	.26	92
	(.04)	(.07)	923
	165	55	
Best friend plans to attend college (1 = yes 0 = no)	.35	.36	92
	(.04)	(.07)	923
	165	55	
Public school (1 = public 0 = other)	.97	.95	92
	(.02)	(.03)	923
	165	55	
Private school (1 = private 0 = other)	.03	.03	92
	(.02)	(.03)	923
	165	55	
Catholic school (1 = catholic 0 = other)	0	.02	92
	(0)	(.01)	923
	165	55	
Urban (1 = urban 0 = other)	.17	.16	92
	(.04)	(.06)	923
	165	55	
Suburban (1 = suburban 0 = other)	.40	.39	92
	(.05)	(.08)	923
	165	55	
Rural (1 = rural 0 = other)	.43	.45	92
	(.05)	(.08)	923
	165	55	

Variable	Teen Mothers	Teen Fathers	Number of Strata and PSUs
New England/Mid-Atlantic regions	.09	.18	92
(1 = NE 0 = other)	(.03)	(.05)	923
	165	55	
Central region	.30	.36	92
(1 = Central 0 = other)	(.04)	(.08)	923
	165	55	
Mountain/Pacific regions	.11	.13	92
(1 = Mount 0 = other)	(.04)	(.05)	923
	165	55	
Southern region	.49	.32*	92
(1 = South 0 = other)	(.05)	(.07)	923
	165	55	
Family Context			
Single parent family	.15	.22	92
(1 = single parent 0 = other)	(.03)	(.07)	922
	160	53	
Number of siblings	2.35	1.83	92
	(.31)	(.34)	910
	157	46	
Grandparents in the household	.07	.04	92
(1 = yes 0 = no)	(.02)	(.04)	923
	165	55	
Family socio-economic status	33.27	46.38*	92
	(2.31)	(4.57)	917
	153	51	
Mother's education	.04	.20*	92
(1 = has a Bachelor's or advanced	(.02)	(.07)	918
degree 0 = other)	161	53	
Father's education	.04	.14	92
(1 = has a Bachelor's or advanced	(.02)	(.05)	915
degree 0 = other)	150	49	
General supervision	.86	.58***	92
(1 = yes 0 = no)	(.03)	(.08)	922
	162	52	
Parents encouraged college attendance	.59	.59	92
(0 = neither, 1 = 1 parent, 2 = both	(.08)	(.13)	923
parents)	165	55	
Parents monitored school progress	1.43	1.09*	92
(0 = neither, 1 = 1 parent, 2 = both	(.07)	(.012)	921
parents)	159	51	
Individual Experiences			
Academic achievement test score	33.79	47.54*	92
	(2.20)	(5.45)	892
	148	52	
Disciplinary problems in school	.25	.61***	92
(1 = yes 0 = no)	(.04)	(.08)	916
	159	48	

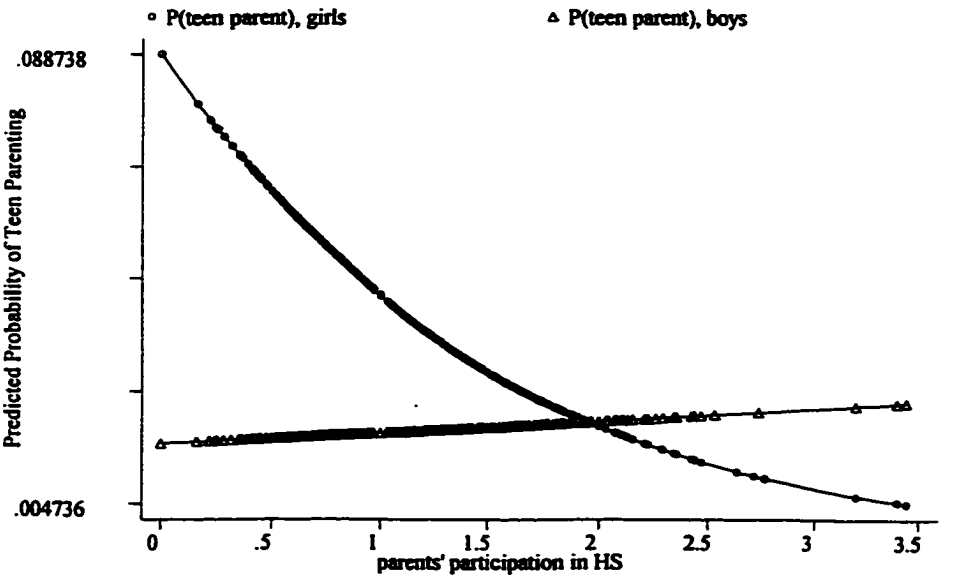
*p < .05 ** p < .01 *** p < .001
Means and standard errors are weighted by participation in all five waves of the study.
Standard errors are in parentheses. Number of observations are listed below standard errors.

Table 6.2. Probit Analysis of Teen Parenting on Sex and Average Level of Parental Participation in the High School for White Youth

Variables	Teen Parent
Sex (1 = female, 0 = male)	.798***
	(.209)
Avg. parental participation in the school	.047
	(.138)
Sex x Avg. parental participation in the school	-.408*
	(.181)
Constant	-2.15***
	(.167)
Pseudo R^2	.03
χ^2	34.39 (3)
	P < .001
N	6491

* p < .05 **p < .01 ***p < .001 Note: Standard errors are robust estimated calculated using Taylor series linearization approximations.

Figure 6.1. Predicted Probability of Teen Parenting for Whites by Level of Parental Participation in the High School



The Transitions to Adulthood

In the following sections, I discuss the aspects of context that had a significant effect on women's and men's outcomes as well as those that had a different effect on the outcomes. The former are noted in bold whereas the latter are underlined in the tables following the convention I established in previous chapters. I also provide a discussion of the joint tests of significance which indicate whether each process as a whole is gendered. The tables are located at the end of the chapter. I give a brief interpretation of these findings after reviewing the sets of outcomes (family formation versus socio-economic achievements).

Union Formation

Model 1 of Table 6.3 shows the effects of social context and other factors on the first transition to adulthood: union formation.[57] In the pooled sample model, the hypothesis test on the regression coefficient for sex indicates that controlling for the influence of social context and other factors, women were more likely to marry or cohabit than men. Comparing the effects of social context for women and men in the subgroup regression models, I find that labor market conditions had no effect on the likelihood of marrying or cohabiting. Although the impact of school context was minimal, certain aspects were important to women's union formation. Family context was more likely to have an effect on men's union formation.

In particular, I find that the likelihood that women would marry or cohabit was reduced by attending a school with highly involved parents. This had no influence on men's union formation. Women who attended high schools in urban and suburban areas

[57] I have chosen not to interpret the effects of race in this chapter. In Chapter 8, I provide a summary and discussion of the impact of race for all the outcome variables.

were less likely to marry or cohabit than women from rural areas. Community type had no effect on men's union formation.

Two aspects of family context were significant to men's union formation: the number of siblings and father's education. An increase in the number of siblings increased the likelihood that men would marry or cohabit net of other factors. In contrast, increases in father's educational level decreased the likelihood that men would marry or cohabit. Neither of these factors affected women.

Instead, women were less likely to marry or cohabit as parental encouragement to attend college increased. This had no effect for men. The influence of parental encouragement to attend college was significantly different for women and men. This was the only factor besides race to have a different effect on women's and men's union formation.[58] The log likelihood test of model equivalence suggests that social context and the other factors had a different effect on union formation for women and men. This provides evidence that the process is gendered. The total variation in women's and men's union formation that is explained by social context and other factors is minimal (pseudo $R^2 <= .10$).

Becoming a Parent

The second transition to adulthood I examine is that of becoming a parent. The hypothesis test on the regression coefficient for sex in the pooled sample (see Model 2 of Table 6.3) indicates that women were more likely to become parents than men after controlling for social context and other factors. A comparison of the subgroup regression results shows that labor market conditions had no effect on whether young women or

[58] Recall that I do not interpret the significant difference in regression coefficients when neither had an effect on the outcome because its meaning is ambiguous.

men became parents. School context was an important predictor of men's entrance into fatherhood whereas family context appears more important for women. This is the reverse of what I found for union formation.

The likelihood that young men would become fathers was influenced by the school SES and attending a school with a large number of students per teacher. Increases in each of these factors delayed men's entrance into parenthood, but had no effect for women. Young women from urban and suburban schools were less likely to become parents than young women from rural areas net of other factors. Community type had no effect on young men's entrance into fatherhood.

Overall, family context had no effect on whether men became fathers. For women, having a well-educated father or parents who encouraged them to attend college reduced the likelihood that they would become mothers. On the other hand, young women who had a large number of siblings were more likely to have a child net of other factors. Again, parental encouragement to attend college significantly reduced the likelihood that women would become parents by age 28 relative to men. Taken together with the findings in the previous section, I conclude that parents' encouragement to attend college had a greater effect on women's family formation than men's.

The differential effect of academic achievement is revealing. Doing well in school delayed young women's entrance into parenthood more than it delayed young men's. Possibly, young women who are academically successful delay childbearing to pursue other opportunities. On the other hand, young men who do well in school delay becoming a parent, but not to the same degree as academically successful women because men combine these roles with greater ease.

The test of model equivalence suggests that the process of becoming a parent is different for women and men. Taken together with the significantly different effects of academic achievement, parental encouragement to attend college, and race as well as the significant sources of influence that exist for one group but not the other, I argue that this process is gendered. The amount of variance explained by social context and other factors is small for both women and men (pseudo $R^2 <= .13$).

Residential Independence

The final family formation outcome I examine is establishing an independent residence. The hypothesis test for the regression coefficient of sex in the pooled sample model of Table 6.4 indicates that women were more likely than men to leave home net of other factors. The results from the subgroup regression analyses indicate that labor market conditions had no effect on whether young women and men left home. The impact of school context was negligible. The only exception was the effect of the log of the students per teacher. Men who attended schools with more students to teachers were less likely to leave home. This had no effect on young women's leaving home.

The influence of family context was more obvious. An increase in the number of siblings and family socio-economic status independently increased the likelihood that young men would establish an independent residence. However, family SES had a greater effect on men's residential independence compared with women. Only father's educational level influenced whether young women would leave home. Having a well-educated father increased the likelihood that young women would establish an independent residence. Father's educational level had no effect on men's home leaving. In other words, father's educational level was more important to women's residential

independence than it was for men's. The test of model equivalence indicates that the transition to residential independence is different for young women and men. The differential effects of family context and the significant effect of an aspect of school context suggest that this transition is gendered. However, the variance explained by either equation is negligible (pseudo $R^2 <= .05$).

Summary of Family Formation Outcomes

To this point, the tests of model equivalence, the differential effects of various regression coefficients, and the sources of significant influence that affect one group and not the other provide evidence that the family formation processes are significantly different for women and men. And, these models are slightly better at explaining women's outcomes although none provides a sizable explanation of the variance (compare the pseudo R^2 values for women and men from each transition).

Contrary to what we might expect, labor market conditions had no long-term effect on whether young women and men married or cohabited, became parents, or left home. Further, school context had a negligible impact on these processes. Family context is more important to each of these processes. Although many aspects of social context did not have a different effect on women's and men's transitions, those that exist bear interpreting.

Parents' encouragement to attend college decreased the likelihood that young women would marry (cohabit) and become a mother. This had no effect for young men. Perhaps, when young women perceive support for activities besides family formation they pursue these other avenues as young adults. Women's outcomes may be more sensitive to this support because traditionally they have been expected to become wives

and mothers early in their life course. Support to do otherwise may be the kind of encouragement that women need to transgress social norms. On the other hand, men typically delay family formation longer than women. Receiving support to attend college does not change the timing of their family formation activities.

Father's educational level also increased the likelihood that women would leave home. A well-educated father may set a standard to which a daughter aspires and this may manifest itself as "striking out" on one's own. This effect indicates that role modeling is based on the level of education a young woman intends to pursue rather than the sex of the parent.

Family socio-economic status had a significantly different effect on women's and men's residential independence. Living in a "wealthier" family increased the likelihood that men would leave home, but it had no effect on women's leaving home. In this case, "wealthier" families may be more likely to provide resources to sons so that they can establish an independent residence whereas women are expected to leave home once they marry regardless of the family's wealth. Put differently, ensuring that daughters establish a separate residence may not be a priority for parents because they expect young women to marry and leave home, but wealthy parents may be especially eager to help their sons establish a separate residence and start a career.

Educational Attainment

The first socio-economic outcome associated with the transition to adulthood is the highest degree earned. The hypothesis test on the regression coefficient for sex in the pooled sample model of Table 6.5 indicates that women and men achieved similar levels of education controlling for social context and other factors. Across the subgroup models,

I find that labor market conditions had no effect on women's and men's educational attainment. School context had a different effect for women and men whereas family context had a similar effect on women's and men's educational achievements.

Young women who attended high SES schools completed more schooling whereas school SES had no effect on men's educational attainment. Young women from the New England and Mid-Atlantic regions also completed more schooling relative to young women from the South. However, these sources of influence were not significantly different for women and men. Other aspects of school context were.

I find that young men were able to convert their teachers' encouragement to attend college into greater educational attainment whereas teachers' encouragement to attend college had no effect on young women's educational attainment. Coupled with the positive effect of best friend's educational plans and parents' encouragement to attend college, young men's educational attainment seem more likely to be influenced by perceived support than young women's. Additionally, young men from the western part of the country completed *less* education than young men from the South. The significance test on the regression coefficients implies that residing in the western part of the country was more detrimental to men's educational attainment than it was to women's.

None of the individual aspects of family context had a significantly different effect on women's and men's educational attainment although the number of siblings had a negative effect on women's achievements and no effect on men's. In the long run, both women and men benefited from parents' education, parental encouragement to attend college, and general supervision. Although discipline problems in school were included as a control, I find that women's educational attainment was significantly diminished

relative to men's attainment when they reported having these problems. Possibly, young women who do not conform to gender expectations of compliance and self-control are penalized more severely than young men who act out. Or, girls who manifest behavior problems may have less expected of them and thereby achieve less. However, boys who misbehave may reinforce what we expect from them and this has less of a detrimental impact on their achievements.

The likelihood ratio test of model equivalence suggests that the educational attainment process was significantly different for women and men. This finding along with the differential effects of teacher encouragement to attend college, discipline problems, and region as well as the other sources that contribute to differentiating women's and men's attainment, lead me to conclude that the educational attainment process is gendered. Even though less than 20% of the variance in educational attainment is explained either equation, this model is better at predicting women's attainment.

Occupational Status Attainment

The final indicator of socio-economic achievement in adulthood is occupational status attainment. The hypothesis test on the regression coefficient for sex in the pooled sample model shown in Table 6.6 indicates that women and men had jobs of comparable status once aspects of social context, race, and other factors were controlled. Comparing the models for females and males, I find that labor market conditions in adolescence had no effect on either women's or men's occupational status. School and family contexts had a significant effect on young women's occupational status and almost no effect on men's occupational status.

Women who attended schools with a large percentage of Black teachers had jobs of lower status in adulthood. Women who attended high school in the western part of the country had lower status jobs than women from the South. None of these factors was significant to men's occupational status. Women who attended Catholic schools received a substantial benefit in terms of occupational status compared with women from public schools. The significance test on the regression coefficient confirms that attending a Catholic school had a greater effect on women's occupational status relative to its effect for men.

Family context had little effect on occupational status overall. However, increases in parental monitoring of school progress translated into higher status jobs for women. This gave women a substantial boost compared with the influence on men's achievements. The only aspect of family context to influence men's occupational status was family socio-economic status. Men from "wealthier" families had higher status jobs. Nevertheless, the effect was not significantly different for women and men.

The Chow test implies that the occupational status attainment process was similar for women and men whereas the test of the individual regression coefficients shows that several aspects of social context had a greater effect for women. The Goldfeld Quandt test suggests that the unmeasured factors' relation to occupational status attainment differed by sex. The evidence describing occupational status attainment as a gendered process appears equivocal.

Overall, the equations explain less than 12% of the variance in occupational status attainment. This is the only model to explain more variation in men's achievements than women's even though the number of significant determinants for men was fewer.

Summary of Socio-Economic Outcomes

According to the hypothesis test on the regression coefficient for sex in the pooled sample model, women and men achieved similar educational and occupational attainment levels after controlling for social context and other factors. However, the findings in the two previous sections suggest that certain aspects of schools and families differentiate women's and men's experiences. Attending a Catholic school had a positive effect on women's occupational status net of other factors. It had no influence on men's achievements. Given that attending a Catholic school had no effect on women's educational attainment and a positive effect on women's occupational status, it is possible that these graduates entered the job market earlier than women from public schools and ascended to higher status jobs within organizations.

If Catholic schools encourage respect and compliance, then female students from these schools would exemplify the qualities that organizations value to an even greater degree than female students from public schools. They might be rewarded for this deference through promotions to jobs of greater status. In contrast, school type had no effect on men's socio-economic achievements. This suggests that male students from public, private, and Catholic schools do equally well in terms of schooling and work. And, the respect and compliance that Catholic schools promote do not benefit men in the same way that they do women.

Women were also able to convert close monitoring of school progress into higher status jobs. Perhaps, parental monitoring of academic progress increases women's academic achievement in turn affecting their occupational achievements. The influence I detect is the total effect that includes the influence of parental monitoring through other

factors as well as its direct effect. Another explanation for this positive effect is that young women may be more responsive to constructive criticism and make adjustments as parents keep track of how they are doing in school. These qualities would be rewarded in an employment setting and would manifest in promotions to jobs of higher occupational status. The values and behaviors that Catholic schools encourage may be the same factors that enable young women to convert parental monitoring into higher status jobs.

The ability of inter-personal relationships between teachers and male students to boost young men's educational attainment requires further explanation. I suggest that among adolescent boys, showing a high degree of interest in school or expressing an interest in additional schooling, a "girl's activity," causes others to question their masculinity (Connell 1997; Connell, Ashenden, Kessler and Dowsett 1982). Under these conditions, any encouragement to attend college is beneficial and this support may compensate for the pain associated with being labeled a "girl." Encouragement from authority figures may be the extra support that men need to further their education. Nevertheless, gender stratification studies find that men who "make it" through college reap greater financial rewards than women.

Why living in the western part of the country is more detrimental to men's educational attainment needs to be explored. Finally, the minimal long-term effects of social context on men's occupational status imply that the school and family background were not very important to their occupational status by age 28. Activities and circumstances after high school may have a greater impact on the status of men's jobs.

Explaining Differences in Family Formation

In each of the pooled sample family formation equations, the significance test on the regression coefficient for sex indicated that women were more likely to enter these roles than men even after I controlled for the effects of social context (and other factors). In other words, even when I compare women and men from similar backgrounds, women were more likely to marry, bear children, and leave home. How do we explain these gender differences in family formation?

One answer is that the differences in family formation patterns result because women and men are treated differently by society.[59] Another explanation is that women and men do not have the same background resources. If women and men received the same encouragement to attend college, attended the same types of schools, and came from the same kinds of families, their family formation activities would be more alike.

The former explanation can be studied through a simulation that exposes women (or men) to the conditions that the other sex experiences but leaves their background resources as they were originally. The latter explanation can be studied by exchanging the background resources of women and men but leaving the valuation of those resources as they were originally. The conditions remain the same, but the background resources are those of the other sex.[60]

To test whether gender differences in family formation can be attributed to differences in treatment versus differences in resources, I compare the actual proportion of women who achieved each of these transitions with the predicted proportion of women

[59] It is important to note that differential treatment (the differential valuation of resources) may also reflect women's and men's different responses to the same situation. There is no way to distinguish these in the analysis I present.

who would have achieved these transitions if they had been treated as (or responded like) men. This identifies whether differential treatment (or responses) explains gender differences in family formation. I obtain the predicted proportion by substituting the means of women's resources (labor market conditions, family context, and school context without controlling for region and urbanicity) in men's regression equations and solving for Y (the dependent variable). This technique depicts the proportion of women who would form families if our society gave women's and men's resources comparable value. In this simulation, women's resources are held constant. I perform the same procedure substituting men's resources in women's regression equations and solving for Y. Table A-8 in the Appendix shows the proportions before and after substitution. I represent these proportions in Figure 6.2.[61]

Statistically, the regression coefficient in the equation represents the treatment (or response) whereas the value of X represents the average background resource for that variable. If differential treatment does not completely explain the actual differences in family formation, then we can assume that background resources make some contribution to this difference. In a future paper, I will proceed with a simulation that exchanges background resources.[62]

Bars 1 and 2 of Figure 6.2 show the proportion of women and men who achieved the particular outcome. Bars 3 and 4 show the proportion of women and men would have achieved that outcome if they had been treated as (or acted like) the other sex. Upon inspection, it appears that women would have behaved like men if their resources had

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[60] Michael and Tuma (1985) and South and Crowder (1999) also use this strategy to explain differences in family formation between women of different racial-ethnic groups.
[61] I repeated the analysis controlling for region and urbanicity. The difference amounted to no more than 1%.

been treated as men's. Similarly, men would have behaved like women if their resources had been treated as women's. Thus, differential treatment explains gender differences in family formation outcomes.

For example, examining the outcomes for union formation, compare bar 2 (the proportion of men who married or cohabited) with bar 3 the proportion of women who would have married or cohabited if they were treated as (or acted like) men. The proportions are nearly identical. In other words, women's propensity to marry was equal to men's when their background resources (school, family, and labor market) were treated like men's. On the other hand, men would be slightly more likely to marry than women if their background resources were treated as women's (compare bars 4 and 1).

I find a similar pattern when I examine the likelihood of becoming a parent. Women were less likely to become parents when their resources were treated like men's (compare bars 1 and 3). Men would have become parents in the same proportion as women if men were treated like women (compare bars 4 and 1). The same trend is evident when I consider establishing an independent residence. The proportion of women who would live apart from their family of origin if treated as men decreased compared with the proportion of women who actually left home (compare bars 1 and 3). When men were treated like women, they were more likely to leave home than they did in actuality (compare bars 2 and 4).

To summarize, the findings in this section demonstrate that women's and men's family formation patterns depend heavily on the way they are treated (or respond). If women were treated as (or acted like) men, we would find a reversal of the actual family

[62] I am indebted to Karen Smith Conway for suggesting this strategy.

formation patterns: women would be less likely to marry or cohabit, have children, and leave home by age 28.

Summary

Based on the findings in the previous sections, I conclude that the processes associated with family formation and educational attainment are different for women and men. However, the evidence related to the gendering of the occupational status attainment process is more ambiguous.

Although some have argued that labor market conditions delay family formation and increase educational attainment, I do not reach the same conclusion. In fact, labor market conditions in adolescence were unrelated to later achievements once I controlled for other factors. Further, the differential effects of school and family context were not consistent across these adult outcomes. This leads me to conclude that the importance of gender depends on the process and the social context under investigation. Yet, there are striking differential effects that include the influence of school type and parental attention on women's outcomes and the influence of teachers' support to attend college on men's educational attainment. I elaborate on these below.

As I noted earlier, women who attended Catholic schools had higher status jobs compared with women from public schools. School type had no effect on men's occupational attainment. For scholars who argue that adolescent girls benefit from attending Catholic schools this seems to be the case. However, attending these schools does not enhance their educational attainment. One plausible explanation is that women from Catholic high schools enter the job market earlier than women from public schools. This additional experience enables them to achieve higher status jobs over time. Another

explanation is that Catholic schools cultivate qualities that are rewarded in employment settings, deference and an ability to accept constructive criticism. Women may be more responsive to this socialization. Because men do not receive the same benefit from attending a Catholic school, I conclude that attending a Catholic school does not perpetuate gender inequality by privileging men. On the contrary, it privileges women. Whether this differential effect continues well into adulthood remains to be determined.

Gender equity scholars assert that teachers pay more attention to boys. Yet, I find that even when women and men report similar encouragement from teachers, the support was more important to men's educational attainment. How can this be? Earlier, I argued that schoolwork is considered a "girl's activity." Under these conditions, an authority figure's affirmation of adolescent boys' masculinity and academic interests may be the added encouragement that boys need. When they perceive that this support exists, they blossom. Adolescent boys may also relish the "positive evaluation" from authority figures especially if it comes from male teachers. This interaction also remains to be investigated.

In contrast, it is *parents'* encouragement to attend college and their monitoring of academic progress that benefit girls. Adolescent girls appear to respond to parental attention in ways that adolescent boys do not. Parental encouragement to attend college had a consistent effect for girls: reducing the likelihood of forming families by age 28 as well as increasing their educational and occupational status attainment. Its influence on women's family formation was over and above its influence on men's. And, the size of the effect was larger for women's socio-economic outcomes although not to a level of

statistical significance. Why would parental attention matter more to adolescent girls than boys?

If we accept the argument that boys are encouraged to become independent of their parents at an early age (Goffman 1977 and Chodorow 1978), then parents may have less influence over their sons relative to their daughters. Therefore, parental attention may be less important to boys' achievements. However, the relationship that parents foster with daughters appears more consequential especially when daughters are encouraged to "better themselves" and break out of traditional gender roles. The emotional investment that parents make in adolescent daughters is important.

I also found that the way women and men were treated profoundly shaped their family formation experiences so that they were different. Women would be less likely to marry, have children, and leave home by age 28 if they were treated as men. Likewise, men would be more likely to marry, have children, and leave home by age 28 if they were treated as women. Of course, the question we need to ask is whether this is important. Knowing that women's socio-economic achievements are curtailed by family responsibilities (Marini 1978b, 1984c), then the differential treatment of young women's resources and women's responses contribute to gender inequality in adulthood.

Table 6.3. Probit Analysis of Adult Family Formation on Social Contexts by Sex

	Model 1 Union Formation			Model 2 Parental Status		
	Pooled	Females	Males	Pooled	Females	Males
Sex (1 = female)	.452***			.445***		
	(.049)			(.049)		
Race (1 = Black)	-.646***	-.980***	-.288	.093	-.127	.342*
	(.110)	(.146)	(.159)	(.109)	(.142)	(.162)
Discipline problems in school	.064	-.001	.105	.190**	.213*	.177*
(1 = yes)	(.067)	(.101)	(.088)	(.066)	(.096)	(.090)
Academic achievement	-.003***	-.005***	-.002	-.006***	-.008***	-.004**
	(.001)	(.001)	(.002)	(.001)	(.001)	(.002)
Labor Market Conditions						
County unemployment, 1982	-.004	-.006	.000	-.004	-.008	.002
	(.007)	(.010)	(.010)	(.007)	(.009)	(.010)
School Context						
% Black teachers	-.001	-.002	.002	-.001	-.002	.002
	(.004)	(.005)	(.006)	(.004)	(.006)	(.006)
% Black students	-.001	.000	-.003	-.002	.000	-.004
	(.003)	(.004)	(.004)	(.003)	(.004)	(.005)
% Female teachers	.001	.003	.001	.001	.002	.000
	(.002)	(.003)	(.004)	(.002)	(.003)	(.004)
% Female students	-.004	-.001	-.003	-.005	.000	-.008
	(.002)	(.004)	(.004)	(.002)	(.004)	(.0042)
Avg. school SES	-.358***	-.405**	-.310*	-.253**	-.185	-.332*
	(.095)	(.129)	(.143)	(.095)	(.123)	(.151)
Catholic (1 = catholic)	.075	-.006	.056	-.105	-.247	-.169
	(.079)	(.141)	(.132)	(.082)	(.139)	(.146)
Private (1 = private)	.062	.162	-.055	-.300	-.436	-.233
	(.154)	(.211)	(.233)	(.175)	(.226)	(.296)
Avg. parental participation	-.114	-.185*	-.056	.002	.002	.009
	(.062)	(.086)	(.099)	(.063)	(.083)	(.096)
Log students/teacher	.035	.091	-.035	-.141*	-.066	-.241*
	(.064)	(.078)	(.102)	(.070)	(.085)	(.112)
Teachers' encouragement to attend	-.012	-.055	.025	.042	.087	.001
college (1 = yes)	(.053)	(.072)	(.077)	(.053)	(.070)	(.081)
Best friend plans to attend college	-.042	-.070	-.038	-.102	-.130	-.092
(1 = yes)	(.056)	(.081)	(.079)	(.055)	(.076)	(.081)
New England/Mid Atlantic	-.415***	-.373***	-.449***	-.297***	-.248*	-.360**
	(.078)	(.110)	(.113)	(.078)	(.103)	(.121)
Central	-.133	-.046	-.195	-.102	-.075	-.119
	(.076)	(.108)	(.108)	(.072)	(.098)	(.110)
Mountain/Pacific	-.091	-.141	-.044	.078	-.012	.172
	(.094)	(.133)	(.133)	(.093)	(.123)	(.140)
Urban	-.086	-.237*	.024	-.077	-.226*	.040
	(.082)	(.110)	(.119)	(.081)	(.108)	(.124)
Suburban	-.155**	-.200*	-.139	-.099	-.167*	-.042
	(.058)	(.080)	(.085)	(.057)	(.076)	(.088)
Family Context						
Single parent family	-.036	.007	-.062	.021	.126	-.086
(1 = yes)	(.075)	(.100)	(.111)	(.075)	(.098)	(.119)
Number of siblings	.031**	.026	.031*	.024*	.038*	.011
	(.011)	(.015)	(.016)	(.011)	(.016)	(.015)
Grandparents live in household	-.082	-.116	-.043	.030	.035	.016
(1 = yes)	(.113)	(.156)	(.159)	(.116)	(.168)	(.161)
Family SES	.001	.001	.000	-.002	-.002	-.001
	(.002)	(.002)	(.002)	(.002)	(.002)	(.002)
Mother's education	.006	-.021	.031	-.012	-.010	-.011
	(.014)	(.019)	(.020)	(.014)	(.019)	(.021)
Father's education	-.032*	-.025	-.039*	-.046***	-.055**	-.039
	(.013)	(.018)	(.019)	(.013)	(.018)	(.020)
Parents' encouragement to attend	-.054	-.122**	-.004	-.114***	-.182***	-.053
college	(.032)	(.046)	(.046)	(.032)	(.043)	(.047)
General supervision	.122	.090	.149	.068	.089	.056
	(.064)	(.098)	(.084)	(.065)	(.096)	(.088)
Monitoring of school progress	.053	.059	.064	-.000	.019	-.014
	(.039)	(.054)	(.057)	(.039)	(.052)	(.059)
Constant	.776**	1.33***	.611	1.21***	1.42***	1.43***
	(.270)	(.377)	(.418)	(.284)	(.384)	(.437)
Pseudo R^2	.08	.10	.04	.11	.13	.08
χ^2	344.41 (30)	217.05 (29)	89.36 (29)	503.76 (30)	320.14 (29)	156.55 (29)
	p < .001	p < .001	p < .001	p < .001	p < .001	p < .001
N	4766	2559	2207	4766	2559	2207

*p < .05 **p < .01 ***p < .001 Note: All standard errors are robust estimates calculated using Taylor series linearization approximations. The Likelihood ratio test of model equivalence for union formation (-2LL = 207.89 (30), p < .001). The Likelihood ratio test of model equivalence for parental status (-2LL = 182.84 (30), p < .001).

Table 6.4. Probit Analysis of Adult Residential Independence on Social Contexts by Sex

	Pooled	Females	Males
Sex (1 = female)	.311***		
	(.057)		
Race (1 = Black)	-.370***	-.503***	-.228
	(.113)	(.149)	(.173)
Discipline problems in school	.070	.009	.115
(1 = yes)	(.076)	(.110)	(.103)
Academic achievement	.003*	.002	.003
	(.001)	(.002)	(.002)
Labor Market Conditions			
County unemployment, 1982	.003	.003	.003
	(.008)	(.010)	(.011)
School Context			
% Black teachers	.003	-.002	.007
	(.004)	(.006)	(.007)
% Black students	-.003	-.002	-.004
	(.003)	(.004)	(.005)
% Female teachers	.000	.004	-.003
	(.003)	(.004)	(.004)
% Female students	-.003	-.007	.003
	(.003)	(.005)	(.004)
Avg. school SES	-.078	-.162	.010
	(.111)	(.150)	(.165)
Catholic	-.080	-.028	-.016
	(.091)	(.169)	(.158)
Private	.169	.525	-.090
	(.197)	(.275)	(.280)
Avg. parental participation	-.060	-.145	.012
	(.074)	(.096)	(.113)
Log students/teacher	-.167*	-.111	-.259*
	(.078)	(.093)	(.131)
Teachers' encouragement to attend	.015	-.019	.024
college (1 = yes)	(.062)	(.083)	(.092)
Best friend plans to attend college	-.109	-.058	-.141
(1 = yes)	(.064)	(.089)	(.094)
New England/Mid Atlantic	-.143	-.156	-.135
	(.086)	(.124)	(.122)
Central	.078	.020	.123
	(.084)	(.120)	(.120)
Mountain/Pacific	-.046	-.148	.028
	(.109)	(.153)	(.158)
Urban	-.050	-.095	-.027
	(.095)	(.132)	(.137)
Suburban	-.088	-.139	-.058
	(.067)	(.091)	(.099)
Family Context			
Single parent family (1 = yes)	.044	.081	.009
	(.088)	(.122)	(.129)
Number of siblings	.036**	.013	.054**
	(.013)	(.017)	(.019)
Grandparents in the household	-.213	-.265	-.159
(1 = yes)	(.122)	(.167)	(.174)
Family SES	.003	.000	.006*
	(.002)	(.003)	(.002)
Mother's education	.005	-.023	.025
	(.017)	(.023)	(.025)
Father's education	.009	.042*	-.016
	(.016)	(.021)	(.023)
Parents' encouragement to attend	-.020	-.055	.014
college	(.037)	(.051)	(.054)
General supervision	.065	.075	.062
	(.072)	(.110)	(.095)
Monitoring of school progress	.014	-.007	.048
	(.044)	(.060)	(.063)
Constant	1.22***	1.85***	.953
	(.320)	(.441)	(.525)
Pseudo R^2	.04	.05	.04
χ^2	105.65 (30)	70.31 (29)	51.68
	p < .001	p < .001	p < .01
N	4910	2649	2261

*p < .05 **p < .01 ***p < .001 Note: All standard errors are robust estimates calculated using Taylor series linearization approximations. Likelihood ratio test of model equivalence (-2LL = 101.72 (30), p < .001).

Table 6.5. Ordered Probit Analysis of Educational Attainment on Social Contexts by Sex

	Pooled	Females	Males
Sex (1 = female)	.017		
	(.043)		
Race (1 = Black)	.236*	.270*	.199
	(.096)	(.121)	(.151)
Discipline problems in	-.221***	-.448***	-.059
school (1 = yes)	(.060)	(.093)	(.077)
Academic achievement	.015***	.016***	.015***
	(.001)	(.001)	(.001)
Labor Market Conditions			
County unemployment,	.007	.009	.007
1982	(.006)	(.007)	(.009)
School Context			
% Black teachers	-.004	-.002	-.006
	(.003)	(.005)	(.005)
% Black students	.005	.003	.006
	(.003)	(.004)	(.004)
% Female teachers	-.003	-.001	-.004
	(.002)	(.003)	(.003)
% Female students	.003	.001	.003
	(.002)	(.003)	(.003)
Avg. school SES	.145	.235*	.046
	(.082)	(.106)	(.127)
Catholic	.128	.206	.045
	(.069)	(.109)	(.121)
Private	.037	.156	-.070
	(.164)	(.188)	(.264)
Avg. parental	.205***	.166*	.247**
participation	(.055)	(.072)	(.084)
Log students/teacher	-.031	-.030	-.050
	(.057)	(.075)	(.090)
Teachers' encouragement	.152***	.055	.257***
to attend college (1 = yes)	(.047)	(.061)	(.071)
Best friend plans to attend	.203***	.254***	.160*
college (1 = yes)	(.047)	(.066)	(.066)
New England/Mid	.204**	.277**	.145
Atlantic	(.070)	(.090)	(.105)
Central	.049	.097	.003
	(.064)	(.081)	(.098)
Mountain/Pacific	-.242**	-.064	-.409***
	(.082)	(.111)	(.120)
Urban	-.147*	-.171	-.122
	(.074)	(.097)	(.115)
Suburban	-.021	-.101	.065
	(.051)	(.066)	(.078)

Table 6.5 continued.

	Pooled	Females	Males
Family Context			
Single parent family (1 = yes)	-.048	-.085	.004
	(.075)	(.090)	(.118)
Number of siblings	-.029**	-.032*	-.026
	(.009)	(.013)	(.014)
Grandparents in the household (1 = yes)	-.184*	-.195	-.166
	(.087)	(.128)	(.121)
Family SES	.002	.003	.001
	(.001)	(.002)	(.002)
Mother's education	.046***	.051**	.040*
	(.012)	(.016)	(.018)
Father's education	.056***	.052**	.060***
	(.012)	(.017)	(.017)
Parents' encouragement to attend college	.229***	.246***	.208***
	(.028)	(.038)	(.042)
General supervision (1 = yes)	.190***	.255**	.143*
	(.058)	(.094)	(.072)
Monitoring of school progress	-.053	-.067	-.046
	(.032)	(.042)	(.050)
Thresholds			
< HS Diploma/Diploma	-.108	-.212	-.158
	(.238)	(.325)	(.378)
Diploma/Certificate	2.00***	2.04***	1.85***
	(.240)	(.329)	(.379)
Certificate/ Associate's degree	2.31***	2.38***	2.13***
	(.240)	(.330)	(.378)
Associate's degree/ Bachelor's degree	2.64***	2.77***	2.40***
	(.241)	(.331)	(.379)
Bachelor's degree/ Advanced degree	4.16***	4.33***	3.90***
	(.248)	(.341)	(.388)
Pseudo-R^2	.15	.16	.14
χ^2	1353.83 (30)	852.53 (29)	630.85 (29)
	p < .001	p < .001	p < .001
N	4887	2646	2241

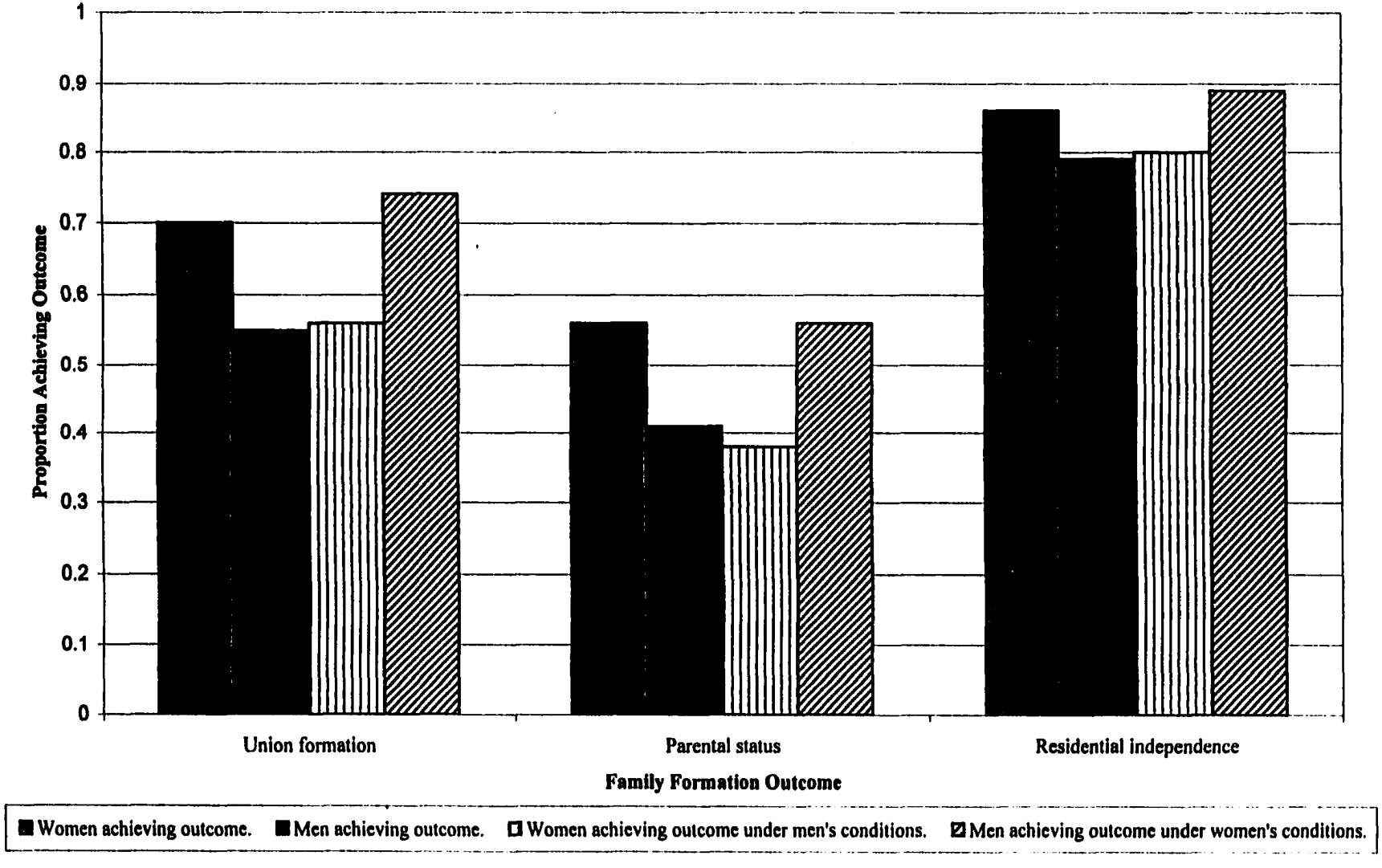
*p < .05 **p < .01 ***p < .001 Note: All standard errors are robust estimates calculated using Taylor series linearization approximations. Likelihood ratio test of model equivalence (-2LL = 91.58 (34), p < .001).

Table 6.6. OLS Regression of Occupational Attainment on Social Contexts by Sex

	Pooled	Females	Males
Sex (1 = female)	-.217		
	(.916)		
Race (1 = Black)	-.120	1.09	-1.51
	(2.03)	(2.86)	(2.89)
Discipline problems in school	-3.29**	-3.60	-2.76
(1 = yes)	(1.22)	(1.85)	(1.65)
Academic achievement	.145***	.124***	.169***
	(.019)	(.026)	(.028)
Labor Market Conditions			
County unemployment, 1982	-.149	-.302	.029
	(.122)	(.173)	(.172)
School Context			
% Black teachers	-.156*	-.234*	-.054
	(.071)	(.102)	(.098)
% Black students	.067	.104	.012
	(.055)	(.077)	(.077)
% Female teachers	-.085	-.096	-.079
	(.044)	(.059)	(.065)
% Female students	.053	-.033	.069
	(.045)	(.071)	(.076)
Avg. school SES	.399	-.597	1.63
	(1.81)	(2.45)	(2.69)
Catholic	4.72**	9.79***	1.89
	(1.52)	(2.69)	(2.49)
Private	1.05	2.23	-.479
	(3.33)	(4.67)	(4.71)
Avg. parental participation	-.962	-1.91	.465
	(1.17)	(1.63)	(1.67)
Log students/teacher	-.847	.228	-2.22
	(1.20)	(1.48)	(1.95)
Teachers' encouragement to attend	1.12	.307	2.07
college (1 = yes)	(1.03)	(1.42)	(1.49)
Best friend plans to attend college	2.11*	2.76	1.82
(1 = yes)	(.999)	(1.50)	(1.34)
New England/Mid Atlantic	-1.14	-1.61	-.693
	(1.48)	(2.11)	(2.05)
Central	-.598	-.979	-.930
	(1.35)	(1.92)	(1.91)
Mountain/Pacific	-5.75***	-7.25**	-4.84
	(1.74)	(2.41)	(2.48)
Urban	-1.71	-3.08	-.210
	(1.47)	(2.10)	(2.07)
Suburban	-.065	-1.99	2.19
	(1.05)	(1.50)	(1.48)
Family Context			
Single parent family	.099	-.124	.028
(1 = yes 0 = other)	(1.47)	(2.00)	(2.15)
Number of siblings	-.334	-.494	-.215
	(.195)	(.297)	(.257)
Grandparents in the household	.631	1.34	-.248
(1 = yes)	(1.94)	(2.91)	(2.53)
Family SES	.086**	.081	.093*
	(.029)	(.043)	(.040)
Mother's education	.094	-.097	.204
	(.258)	(.374)	(.354)
Father's education	-.117	-.020	-.217
	(.261)	(.377)	(.364)
Parents' encouragement to attend	3.76***	4.04***	3.21***
college	(.578)	(.825)	(.817)
General supervision	2.32*	3.28	1.61
(1 = yes)	(1.17)	(1.90)	(1.47)
Monitoring school progress	.694	2.20*	-1.29
	(.730)	(.998)	(1.05)
Constant	36.18***	39.94***	36.85***
	(5.00)	(7.03)	(7.85)
R^2	.12	.12	.15
F	17.21	9.37	9.80
	(30, 4776)	(29, 2534)	(29, 2213)
	p < .001	p < .001	p < .001
N	4807	2564	2243

*p < .05 **p < .01 ***p < .001 Note: All standard errors are robust estimates calculated using Taylor series linearization approximations. The Chow test of model equivalence (F (30, 4747) = .704, p > .50). Goldfeld Quandt test (F (2534, 2213) = 1.19, p < .001).

Figure 6.2 Explaining Gender Differences in Family Formation



CHAPTER 7

THE LONG TERM EFFECTS OF SELF-ESTEEM ON THE TRANSITION TO ADULTHOOD

The recent concern over the drop in girls' self-esteem from elementary to high school created a flurry of research on the short-term effects of girls' self-esteem. However, we know very little about its long-term impact. Does self-esteem in adolescence affect adult achievements? Does it have a different effect for young women and men? In the long run, are adolescent girls disadvantaged because they have lower self-esteem than boys do? These are questions that I answer in this chapter. The analysis I present is different from previous research in two ways. Because the emphasis of this dissertation is on gender, I include adolescent boys in my study and contrast their experiences with adolescent girls' experiences. Research that grew out of the American Association of University Women's work has focused primarily on girls' experiences (Orenstein 1994; Pipher 1994; Sadker and Sadker 1994; Taylor, Gilligan, and Sullivan 1995). My work also elaborates the research of the AAUW by studying the effects of self-esteem when they report it was at its lowest: the tenth grade.

I divide this chapter into four sections. In the first section, I determine whether and how family and school contexts affect adolescent girls' and boys' self-esteem. In the second section, I examine the impact of self-esteem in tenth grade on adolescent girls' and boys' completion of advanced math and science courses. This contributes to the

literature on the short-term effects of adolescent self-esteem. In the third section, I determine the extent to which self-esteem affects family formation and socio-economic outcomes when I consider only the effects of sex and self-esteem. The final section of this chapter determines whether self-esteem has a lasting impact on the adult status outcomes once I control for family, school, and labor market contexts.

The analytic model that I test is depicted in Figure 4.4.[63] As done in the previous chapter, I examine each indicator of adult status separately. I perform the regression analysis for females and males by running the same model for each subgroup. For comparison purposes, I provide a pooled sample model that includes a dummy variable for sex. My interpretations focus on the regression models for the subgroups: females and males.

The Differential Effect of Social Context on Adolescent Girls' and Boys' Self-Esteem[64]

Before examining the effects of school and family context, I test the role model hypothesis posited in Chapter 2: increases in the proportion of female teachers will have a positive effect on girls' self-esteem, but they will have no effect on boys' self-esteem. In

[63] I intentionally do not examine the impact of local labor market conditions on self-esteem for a number of reasons. A large body of literature suggests that an *individual's* experience of unemployment affects her/his self-esteem. However, unemployment at the aggregate level may not have the same impact. In fact, it may be more fruitful to examine the interaction between aggregate unemployment and individual level unemployment on self-esteem. Perhaps when local unemployment is high, the individual's experience of unemployment has no impact on self-esteem whereas when local unemployment is low, the individual's experience of unemployment is detrimental to self-esteem. More relevant to my work would be assessing whether *adolescent* unemployment rates affect adolescent self-esteem. In addition, adolescents can "choose" not to work with less threat to their sense of self-worth because we do not expect them to maintain households with their wages. On the other hand, adults are expected to work and as a result, their self-concept is closely tied to gainful employment. For these reasons, I do not examine the impact of county unemployment on adolescent self-esteem.

[64] Twenty-nine percent of the participants were missing information on the self-esteem measure. Part of this resulted because I recoded participants who responded with "no opinion" as missing cases. The original Rosenberg self-esteem scale does not include this option and most of the research conducted with it also does not permit "no opinion" responses. To determine whether participants who were missing self-esteem information were significantly different from those with information, I entered a dummy variable in my multivariate equations. None of the adult status outcome equations suggested that respondents who were missing self-esteem information differed from respondents with that information.

Chapter 2, I also argued that the benefits girls receive from female professional role models may not be linear, but may change beyond a certain threshold. It is possible that an increase in the percentage of female teachers boosts girls' self-esteem until the percentage reaches majority. Then, I may find that the increases beyond this point have no effect. When female teachers are in the minority, they may provide "special treatment" (extra time or attention) to female students because they identify with each other. This would serve to boost girls' self-esteem. Once female teachers comprise the majority, "special treatment" and shared identification may become less important to young women's feelings of self-worth. To determine whether and where the influence of female role models changes, I include a quadratic term: the squared percentage of female teachers.

The results of the analysis of the role model hypothesis are presented in Table 7.1. The interaction term in Model 1 of Table 7.1 suggests that the percentage of female teachers had a different effect on adolescent girls' and boys' self-esteem. I find that as the percent of female teachers increased, girls' self-esteem increased linearly; however, the effect on boys' self-esteem was negligible (figure not shown). To determine whether the effect of the percent of female teachers changed beyond a certain threshold, I included the squared percent of female teachers in the equation (see Model 2, Table 7.1). The interaction between sex and the squared percentage of female teachers indicates that the effect of the percentage of female teachers on self-esteem is different for adolescent girls and boys. Figure 7.1 shows how the percent of female teachers affected the self-esteem of adolescent girls and boys. Boys consistently had higher self-esteem than girls; however, boys' self-esteem dropped as the percentage of female teachers reached fifty. Beyond this

point, it increased. Increases in the percent of female teachers had a positive effect on girls' self-esteem although the magnitude of the effect appears to level off after 50%.[65]

Can we elaborate this association? Do other aspects of school and family context affect girls' and boys' self-esteem differently? In the next set of analyses, I include measures of school quality and composition, region, community type, family composition and socio-economic status, parenting practices, and controls for academic achievement and discipline problems in school.

For this analysis, I split the sample by sex and performed ordinary least squares regression with self-esteem in tenth grade on race, school context, family context, and the control variables. The hypothesis test on the regression coefficient for sex in Model 1 of Table 7.2 suggests that girls' self-esteem was lower than boys' self-esteem even after controlling for race, school and family contexts, academic achievement, and discipline problems in school. In other words, these factors were not sufficient to explain the gender gap in self-esteem. When I compare Models 2 and 3, I find that the school context had a negligible impact on adolescent boys' self-esteem. Family context had a significant effect on girls' self-esteem and less of an effect on boys' self-esteem.

Although the percentage of female teachers affected adolescent girls' self-esteem, its positive impact (as noted by the linear term) decreased once the percentage of female teachers exceeded fifty-five (figure not shown).[66] After this point, increasing the

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[65] The quadratic term suggests that the effect of the percentage of female teachers changes direction at some point. To test whether the influence of the percentage of female teachers is better described as a plateau effect, I performed another set of regression analyses using the reciprocal of the percent of female teachers along with a complete set of interaction terms. None of the interaction terms that included the percentage of female teachers had a significant effect on self-esteem. Therefore, the square term is the more appropriate depiction of the relation between female teachers and girls' self-esteem.

[66] I determined the point at which the effect changed by substituting the regression coefficient values in the following equation and solving for $X = -b_1/2b_2$ where b_1 is the coefficient on the linear term for percentage of female teachers and b_2 is the coefficient on the quadratic term for percentage of female teachers.

percentage of female teaching staff had a negative effect on girls' self-esteem. This effect was significantly different for girls and boys. I also find that girls who attended schools located in the Central and Mountain/Pacific regions of the country had higher self-esteem than girls in the South net of other factors. Region had a significantly different effect on girls' and boys' self-esteem. Girls from urban areas had higher self-esteem than girls from rural areas. Community type had no effect on boys' self-esteem. However, its influence was not statistically different for girls and boys.

Several aspects of family context affected girls' and boys' self-esteem. Girls' self-esteem increased when they lived in single parent families or came from "wealthier" families. Neither of these factors influenced boys' self-esteem. Nevertheless, the influence of these factors was not significantly different for girls and boys. Boys who reported having discipline problems in school had lower self-esteem than boys who did not report being in trouble. Discipline problems in school had no effect on girls' self-esteem. This effect was not statistically different for girls than boys.

The Chow test suggests that the self-esteem development process was significantly different for adolescent girls and boys. The Goldfeld Quandt test provides further evidence that the development of self-esteem is gendered since the error variances (unmeasured factors related to adolescent girls' and boys' self-esteem) were not equal. The two equations explain a small portion of the variance in self-esteem ($R^2 <= .12$).

Summary

According to these findings, school and family had a negligible impact on the self-esteem of tenth grade boys. Being surrounded by female professional role models enhanced girls self-esteem net of other factors even though I found a slight reduction in

their self-esteem when the percentage of female teachers exceeded fifty-five. I would argue that until the percentage of female teachers reaches majority, adolescent girls and female teachers feel a kinship with one another that is fostered by their "subordinate" status. Once female teachers reach majority, two processes may be at work to cause a correction factor in girls' self-esteem. Female teachers may treat female students differently and reduce the extra attention given to girls as the teachers begin to reject their subordinate status. Or, the high concentration of female teachers lowers the status of the teaching profession from girls' perspective and increases feelings of discouragement especially among girls who want to become teachers. In a sense, these girls may begin to wonder: is this all that we can aspire to?

Girls from single parent families had higher self-esteem than girls from other family types. Possibly girls from single parent families took greater responsibility for themselves and their family and this had a positive effect on their self-esteem. Or, girls from single parent families identified with their single parent who served as their role model. In analysis not presented here, I replaced the single parent family variable with a dummy variable indicating whether the father was in the household. Having one's father in the household had a significant and detrimental impact on girls' self-esteem ($p < .01$) net of other factors. Father's presence had no effect on boys' self-esteem. This difference in the effect on girls' and boys' self-esteem was significant at $p < .10$.

During adolescence, girls' self-esteem appears quite sensitive to role modeling (the percentage of female teachers) and their relations with their father. The regional effects on girls' self-esteem need to be investigated further. As I mentioned in earlier

chapters, the South appears to cultivate a culture that is more detrimental to girls than boys.

Table 7.1 OLS Regression of Tenth Grade Self-Esteem on Percent of Female Teachers and Sex of Student

	Model 1 without quadratic terms	Model 2 with quadratic terms
Sex (1 = female, 0 = male)	-.222***	-.406***
	(.047)	(.105)
% female teachers	-.002	-.005
	(.001)	(.003)
Sex x % female teachers	.003**	.011**
	(.001)	(.004)
% female teachers^2		.0001*
		(.000)
Sex x % female teachers^2		-.0001*
		(.0000)
Constant	3.32***	3.21***
	(.073)	(.060)
F	21.77	14.28
	(3, 5370)	(5, 5368)
	$p < .001$	$p < .001$
R^2	.02	.02
N	5374	5374

*p < .05 **p < .01 ***p < .001 Note: All standard errors are robust estimates calculated using Taylor series linearization approximations.

Figure 7.1. Predicted Self-Esteem by Percentage of Female Teachers and Sex (with quadratic terms and without controls), 1980

Table 7.2. OLS Regression of Self-Esteem on the School and Family Contexts Of Adolescent Girls and Boys

	Model 1 Pooled Sample	Model 2 Females	Model 3 Males
Sex (1 = female)	-.108***		
	(.016)		
Race (1 = Black)	.311***	.376***	.240***
	(.035)	(.042)	(.059)
Discipline problems	-.064**	-.057	-.069*
(1 = yes)	(.023)	(.034)	(.032)
Academic achievement	.001***	.001***	.002***
	(.000)	(.000)	(.000)
School Context			
% Black teachers	-.000	-.002	.001
	(.001)	(.002)	(.002)
% Black students	-.001	.000	-.001
	(.001)	(.001)	(.001)
% female teachers	.002	.011**	.000
	(.002)	(.004)	(.004)
% female teachers^2	-.000	-.0001*	-.000
	(.000)	(.00004)	(.000)
% female students	-.001	.002	-.002
	(.001)	(.002)	(.002)
Average school SES	-.063*	-.063	-.059
	(.030)	(.040)	(.046)
Catholic	.033	-.014	-.029
	(.029)	(.045)	(.041)
Private	.104*	.123	.091
	(.046)	(.067)	(.063)
Average parental participation	-.007	-.010	.000
	(.019)	(.027)	(.029)
Log students/teacher	.007	.009	.004
	(.020)	(.025)	(.034)
New England/Mid-Atlantic	.016	.035	-.017
	(.025)	(.033)	(.037)
Central	.023	.070*	-.030
	(.024)	(.032)	(.036)
Mountain/Pacific	.060*	.131**	-.017
	(.030)	(.042)	(.042)
Urban	.048	.077*	.002
	(.025)	(.035)	(.036)
Suburban	.031	.039	.017
	(.019)	(.025)	(.030)
Family Context			
Single parent family	.074***	.106***	.039
(1 = single parent)	(.023)	(.030)	(.035)
Number of siblings	-.007	-.003	-.009
	(.004)	(.004)	(.005)
Grandparents in household	-.023	-.049	.012
(1 = yes)	(.039)	(.051)	(.059)
Family SES	.001***	.002**	.001
	(.000)	(.0005)	(.001)
General supervision	.086***	.105**	.070*
	(.022)	(.033)	(.031)
Monitoring of school progress	.073***	.077***	.068***
	(.014)	(.018)	(.021)
Constant	2.66***	2.05***	2.92***
	(.102)	(.181)	(.151)
R^2	.10	.12	.07
F test	11.72 (25, 3987)	9.07 (24, 2132)	4.05 (24, 1831)
	P < .001	P < .001	P < .001
N	4013	2157	1856

*p < .05 **p < .01 ***p < .001 Note: Robust standard errors were calculated using Taylor series linearization approximations. Chow test (F (25, 3963) = 3.28, p < .001). Goldfeld Quandt test (F (2157, 1856) = 1.09, p < .001).

Gender, Self-Esteem, and Math-Science Coursework

In Chapter 2, I described the concern over girls' failure to complete advanced math and science courses. What we do not know is whether social context and self-esteem have a different effect on adolescent girls' and boys' completion of these courses. Does high self-esteem increase the likelihood that adolescent boys will complete these courses while having no impact on adolescent girls' course completion? Are adolescent girls with low self-esteem more disadvantaged than adolescent boys with low self-esteem in terms of completing advanced math and science courses? We also need to know whether completing advanced math and science course work has a different effect on women's and men's socio-economic outcomes.[67]

I begin by examining the extent to which self-esteem interacts with sex to influence these course decisions without including the effects of social context and other factors. Table 7.3 shows that students with high self-esteem were more likely to complete advanced math and science course work after controlling for the effect of sex. The interaction term in Model 1 suggests that girls with high self-esteem were less likely to complete advanced math courses than boys with high self-esteem.

Figure 7.2 illustrates that girls with low self-esteem had a greater probability of completing advanced math courses than boys with low self-esteem. This changed once girls and boys had a self-esteem score of 2.7 and greater.[68] After this point, boys were more likely to complete advanced math courses than girls with the same level of self-esteem.

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[67] I address this association in a future paper.

[68] This is a rough estimate because coefficients in probit are functions of all coefficients and variables (Xs) in the equation. They are not measures of marginal effects. See footnote 70 for the method used to identify crossover points in linear models.

As shown in Model 2 of Table 7.3 and illustrated in Figure 7.3, high self-esteem increased the likelihood that both girls and boys completed advanced science courses, but boys with high self-esteem were much more likely to complete these courses than girls with equivalent levels of self-esteem. However, the variance explained by sex and self-esteem for both of these outcomes is too small to suggest that sex and self-esteem had much effect on advanced coursework completion (pseudo $R^2 <= .03$).

Do labor market, school, and family contexts account for the association between self-esteem and completion of advanced course work? Table 7.4 indicates that self-esteem had a marginally significant impact on boys' completion of these advanced courses even after controlling for social context and other factors. In other words, boys' feelings of self-worth influenced whether they would complete advanced math and science over and above other factors. Self-esteem had no impact on whether young women completed advanced math and science. Stated differently, whether girls had low or high self-esteem was irrelevant to their completion of these advanced course after controlling for social context and other factors. Yet, the influence of self-esteem is not significantly different for girls and boys.

The tests of model equivalence suggest that the process determining advanced math completion is similar for young women and men whereas the process determining advanced science completion is significantly different. When examining the model as a whole, I conclude that social context and other factors contribute to the gendering of advanced science course work completion. The amount of variance explained in both outcomes also indicates that social context and the controls add substantial explanatory power over the original sex and self-esteem model (pseudo $R^2 <= .28$).

From this brief analysis, I conclude that girls with low self-esteem were not disadvantaged compared with boys who had low self-esteem. After controlling for a number of factors that predicted advanced coursework completion, I find that self-esteem is somewhat important to boys' achievements but it is not important for girls. If we agree that math and science course work is associated with later achievement at least for men, then we can assume that boys' self-esteem indirectly affects their achievement through the completion of advanced math and science courses. In other words, high self-esteem contributes to success for boys whereas girls with high self-esteem may not reap the same kinds of benefits.

Table 7.3. Probit Analysis of Completed Advanced Math and Science Courses on Self-Esteem and Sex

	Model 1 Advanced Math	Model 2 Advanced Science
Sex (1 = female, 0 = male)	.597 (.409)	.208 (.424)
Self-Esteem	.375** (.095)	.349** (.090)
Sex x Self-Esteem	-.225+ (.130)	-.196 (.135)
Constant	-2.35*** (.305)	-2.08*** (.287)
Pseudo R^2	.01	.03
χ^2	24.49 (3) p < .001	77.46 (3) p < .001
N	4625	4625

+p < .10 *p < .05 **p < .01 ***p< .001 Note: Standard errors are robust estimates calculated using Taylor series linearization approximations.

Figure 7.2. Predicted Probability of Completing Advanced Math by Sex and Self-Esteem (without controls)

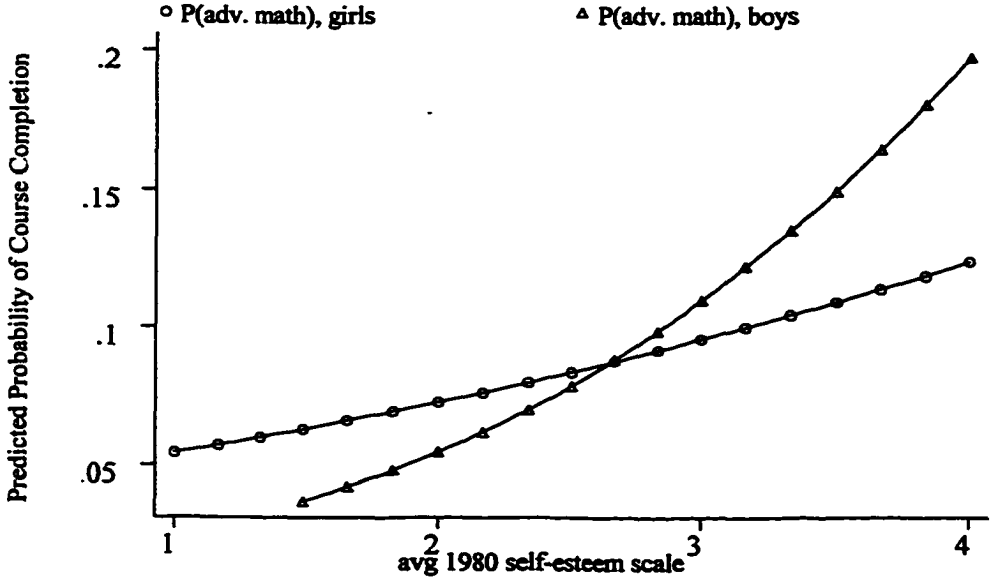


Figure 7.3. Predicted Probability of Completing Advanced Science by Sex and Self-Esteem (without controls)

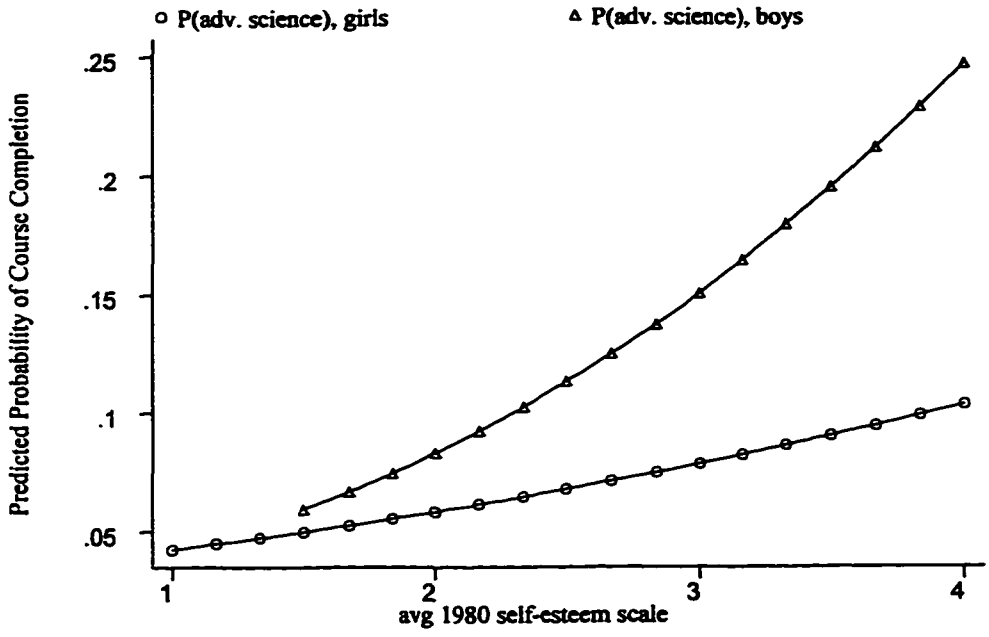


Table 7.4. Probit Analysis of Advanced Math/Science Coursework on Social Contexts and Self-Esteem by Sex

	Model 1 Advanced Math			Model 2 Advanced Science		
	Total	Females	Males	Total	Females	Males
Sex (1 = female)	.004			-.487***		
	(.077)			(.081)		
Race (1 = Black)	.314	.466	.146	-.396*	-.201	-.529
	(.180)	(.252)	(.250)	(.197)	(.233)	(.283)
Self-esteem	.142	.084	.208*	.162*	.072	.239*
	(.088)	(.123)	(.125)	(.090)	(.132)	(.123)
Discipline problems in school	-.360***	-.583***	-.256	-.211	-.186	-.218
(1 = yes)	(.140)	(.216)	(.188)	(.136)	(.205)	(.174)
Academic achievement	.025***	.023***	.029***	.029***	.033***	.027***
	(.002)	(.003)	(.003)	(.002)	(.003)	(.003)
Labor Market Conditions						
County unemployment, 1982	.024*	.022	.032	.015	.012	.019
	(.010)	(.013)	(.017)	(.011)	(.016)	(.014)
School Context						
% Black teachers	-.000	-.006	.006	.011	.016	.010
	(.007)	(.011)	(.008)	(.007)	(.012)	(.009)
% Black students	.002	.005	-.000	.000	-.002	.002
	(.005)	(.007)	(.007)	(.006)	(.008)	(.008)
% Female teachers	.001	.001	.003	-.005	-.002	-.003
	(.004)	(.005)	(.006)	(.004)	(.006)	(.005)
% Female students	-.002	.005	-.004	.004	-.010	.004
	(.004)	(.005)	(.006)	(.004)	(.006)	(.005)
Avg. school SES	.167	.241	.053	-.275	-.263	-.290
	(.144)	(.194)	(.220)	(.146)	(.226)	(.197)
Catholic (1 = catholic)	.453***	.286	.463*	.181	.497*	.139
	(.119)	(.200)	(.195)	(.123)	(.215)	(.190)
Private (1 = private)	.227	.344	.124	.315	.226	.347
	(.229)	(.311)	(.330)	(.242)	(.394)	(.325)
Avg. parental participation	.063	-.051	.203	.061	.022	.097
	(.097)	(.133)	(.141)	(.098)	(.145)	(.136)
Log students/teacher	.004	-.183	.189	.068	.196	.024
	(.089)	(.108)	(.132)	(.099)	(.135)	(.143)
Teachers' encouragement to	.083	.001	.169	.173*	.162	.229*
attend college (1 = yes)	(.074)	(.104)	(.109)	(.080)	(.119)	(.107)
Friend plans to attend college	.034	.098	-.025	.257*	.099	.340*
(1 = yes)	(.104)	(.154)	(.144)	(.108)	(.173)	(.135)
New England/ Mid Atlantic	.616***	.553***	.683***	.599***	.517**	.663***
	(.124)	(.158)	(.190)	(.129)	(.183)	(.177)
Central	.255*	.215	.286	.076	-.102	.178
	(.122)	(.159)	(.184)	(.130)	(.189)	(.175)
Mountain/Pacific	.132	.043	.206	-.356*	-.534*	-.240
	(.148)	(.188)	(.223)	(.160)	(.240)	(.209)
Urban	-.169	-.144	-.180	-.113	-.095	-.144
	(.129)	(.171)	(.196)	(.127)	(.178)	(.180)
Suburban	.136	.150	.212	-.083	-.117	-.035
	(.096)	(.129)	(.146)	(.097)	(.135)	(.141)
Family Context						
Single parent family	-.018	-.117	.127	.038	.013	.060
(1 = yes)	(.131)	(.170)	(.194)	(.122)	(.184)	(.164)
Number of siblings	-.002	.003	-.007	-.003	.041	-.031
	(.017)	(.024)	(.025)	(.019)	(.025)	(.028)
Grandparents in household	.089	.036	.161	-.033	-.230	.164
(1 = yes)	(.179)	(.245)	(.261)	(.175)	(.290)	(.215)
Family SES	-.001	-.002	.001	-.001	.004	-.004
	(.003)	(.003)	(.004)	(.003)	(.004)	(.004)
Mother's education	-.004	-.010	.002	-.011	.008	-.018
	(.021)	(.030)	(.030)	(.022)	(.033)	(.029)
Father's education	.023	.010	.041	.047*	-.022	.090**
	(.021)	(.029)	(.030)	(.022)	(.035)	(.028)
Parents' encouragement to attend	.206***	.305***	.085	.261***	.238*	.269**
college	(.064)	(.096)	(.088)	(.064)	(.094)	(.085)
General supervision	.146	.068	.181	.123	.452*	.009
(1 = yes)	(.112)	(.193)	(.139)	(.114)	(.204)	(.139)
Monitoring of school progress	.114	.185	.020	-.173*	-.169	-.167
	(.075)	(.106)	(.107)	(.072)	(.108)	(.094)
Constant	-4.84***	-4.22***	-6.10***	-4.57***	-5.09***	-4.76***
	(.508)	(.653)	(.761)	(.557)	(.874)	(.756)
Pseudo R^2	.24	.24	.26	.28	.28	.27
χ^2	389.42 (31)	219.29 (30)	290.26 (30)	390.84 (31)	191.17 (30)	215.27 (30)
	p < .001	p < .001	p < .001	p < .001	p < .001	p < .001
N	3289	1763	1526	3289	1763	1526

$^{+}p < .10$ $^{*}p < .05$ $^{**}p < .01$ $^{***}p < .001$ Marginal effects denoted for self-esteem only. Note: All standard errors are robust estimates calculated using Taylor series linearization approximations. Likelihood ratio test of model equivalence for advanced math (-2LL = 27.5 (31), p > .50). Likelihood ratio test of model equivalence for advanced science (-2LL = 83.78 (31), p < .001).

Gender, Self-Esteem, and Adult Status Outcomes

The publicity over the drop in girls' self-esteem from grades four to ten has initiated a number of social programs designed to boost girls' self-esteem. As I mentioned in Chapter 2, very little research has been done to determine whether self-esteem in adolescence has a different effect on young women's and men's long term achievements. This section answers the questions: Without accounting for the effects of social context on the transition to adulthood, does self-esteem influence adult achievements? And, are adolescent girls with low self-esteem at a greater disadvantage compared with adolescent boys with low self-esteem?

Table 7.5 shows the effects of sex and self-esteem on the indicators of adult status.[69] The significance test for the self-esteem variable indicates that self-esteem had no effect on union formation or becoming a parent. However, the interaction terms for the remaining adult status indicators suggest that the effects of self-esteem depend to some extent on sex.

Figure 7.4 illustrates that women with low self-esteem in the tenth grade were more likely to leave home whereas men with low self-esteem were less likely to leave home. When I compare women and men with high self-esteem, they were equally likely to leave home. The effect of self-esteem on women's and men's educational attainment was also marginally significant. Figure 7.5 indicates that women with low self-esteem were more likely to complete a Bachelor's degree than men with low self-esteem. When both women and men had self-esteem scores of at least 3.5, the benefits that women and

[69] The ordered probit estimation of educational attainment provides predicted probabilities for each educational level: high school drop out through advanced degree. I have chosen to illustrate the effect of self-esteem on the probability of obtaining a Bachelor's degree for women and men. The effect of self-esteem on the other educational outcomes is represented in the Appendix.

men accrued from self-esteem changed relative to one another. After this point, men with high self-esteem were more likely to complete a Bachelor's degree than women with high self-esteem.

Table 7.5 shows that self-esteem and sex interact to influence women's and men's occupational status. Figure 7.6 illustrates that women who reported having low self-esteem in tenth grade actually had higher status jobs than men who reported having low self-esteem. This pattern reversed when women and men had self-esteem scores of 3.13 or greater.[70] After this point, men with high self-esteem in the tenth grade obtained higher status jobs than women with the same level of self-esteem. Again, it appears that women with low self-esteem in the tenth grade were actually advantaged relative to men in terms of occupational status in adulthood. In essence, it is not women who reported low self-esteem in adolescence who were disadvantaged relative to men, but women who reported having high self-esteem. The benefits that women receive from high self-esteem do not appear as great as the benefits that men receive.

If the concern is over increasing the chances of socio-economic success for adolescents with low self-esteem, then the emphasis needs to be on *boys* with low self-esteem given the gap in long-term achievement between girls and boys who report low self-esteem. We also need to determine why women with high self-esteem had lower achievements relative to men with high self-esteem. Because I explain a very small amount of variance in these outcomes with sex and self-esteem, I include the effects of social context in the next set of analyses. This will permit me to determine whether the

[70] This value can be obtained directly from Table 7.5 by creating two equations (one for each subgroup) substituting the values for sex in the equation, setting the equations equal to one another, and solving for X (self-esteem).

association between sex, self-esteem, and the adult status outcomes is influenced by social context.

Table 7.5. Sex and Self-Esteem as Predictors of Adult Status Outcomes

	Union Formation	Parental Status	Residential Independence	Educational Attainment	Occupational Attainment
Sex (1 = female, 0 = male)	.813* (.322)	.724* (.313)	.968* (.384)	.520* (.263)	14.60* (6.40)
Self-Esteem	.023 (.075)	-.043 (.076)	.148^{+} (.087)	.386*** (.064)	7.15*** (1.46)
Sex x Self-Esteem	-.142 (.104)	-.116 (.101)	-.242^{+} (.124)	-.153^{+} (.085)	-4.66* (2.08)
Constant	.083 (.236)	-.136 (.239)	.396 (.272)		26.46*** (4.56)
Thresholds					
< HS Diploma/ HS Diploma				-.436* (.203)	
HS Diploma/ Certificate				1.26*** (.202)	
Certificate/ Associate's				1.50*** (.202)	
Associate's/ Bachelor's				1.73*** (.203)	
Bachelor's/ Advanced				2.95*** (.206)	
R^2	.02	.02	.01	.01	.01
Joint effects test	χ^2 (3) = 81.77 p < .001	χ^2 (3) = 86 p < .001	χ^2 (3) = 24.39 p < .001	χ^2 (3) = 53.71 p < .001	F = 8.96 (3, 5392) p < .001
N	5344	5344	5511	5481	5396

$^{+}$p < .10 *p < .05 **p < .01 ***p < .001 Note: All standard errors are robust estimates calculated using Taylor series linearization approximations. Family formation outcomes are estimated with probit regression, educational attainment is estimated with ordered probit, and occupational attainment is estimated with OLS regression.

Figure 7.4. Predicted Probability of Leaving Home by Sex and Self-Esteem in Adolescence

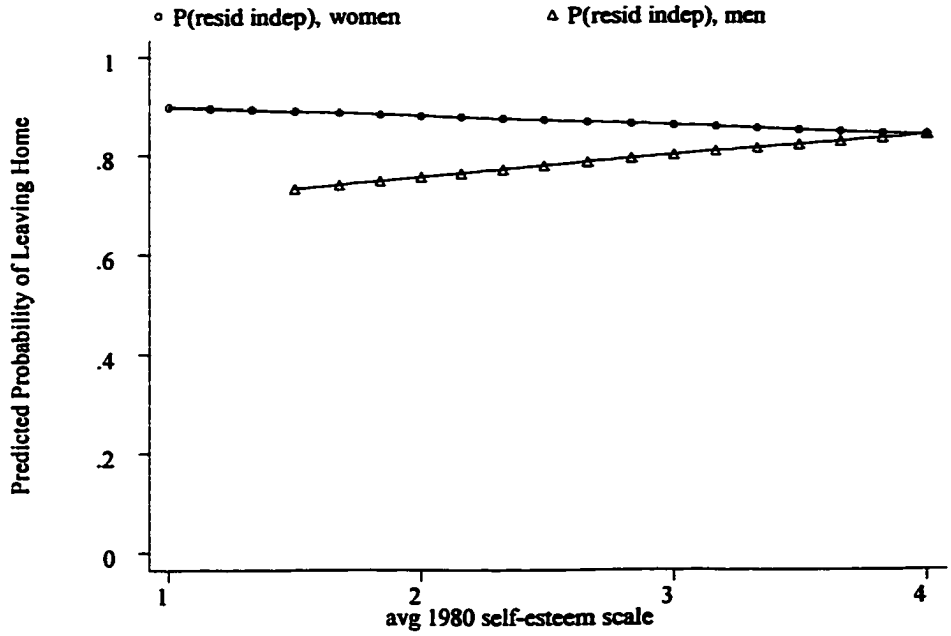


Figure 7.5. Predicted Probability of Obtaining a Bachelor's Degree by Sex and Self-Esteem in Adolescence

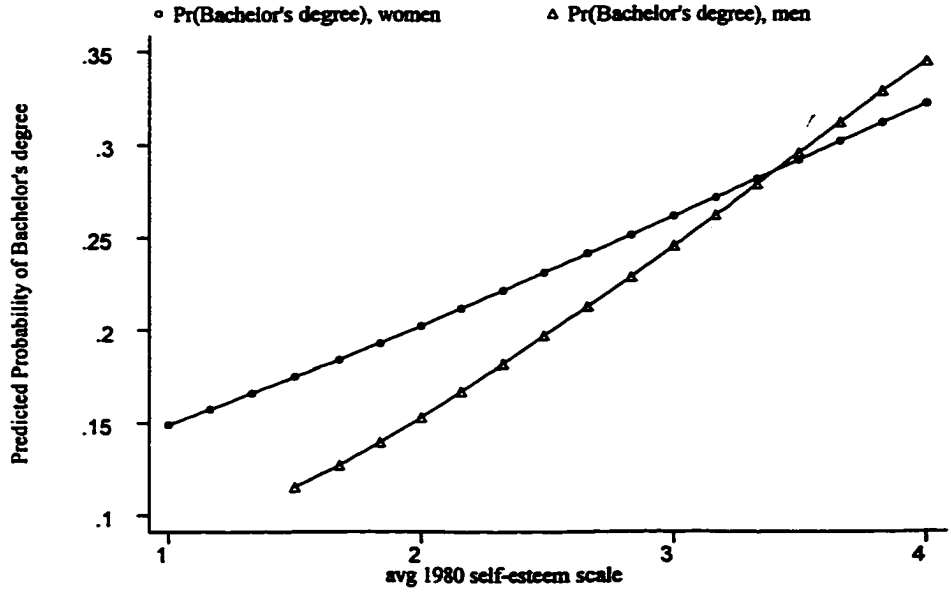
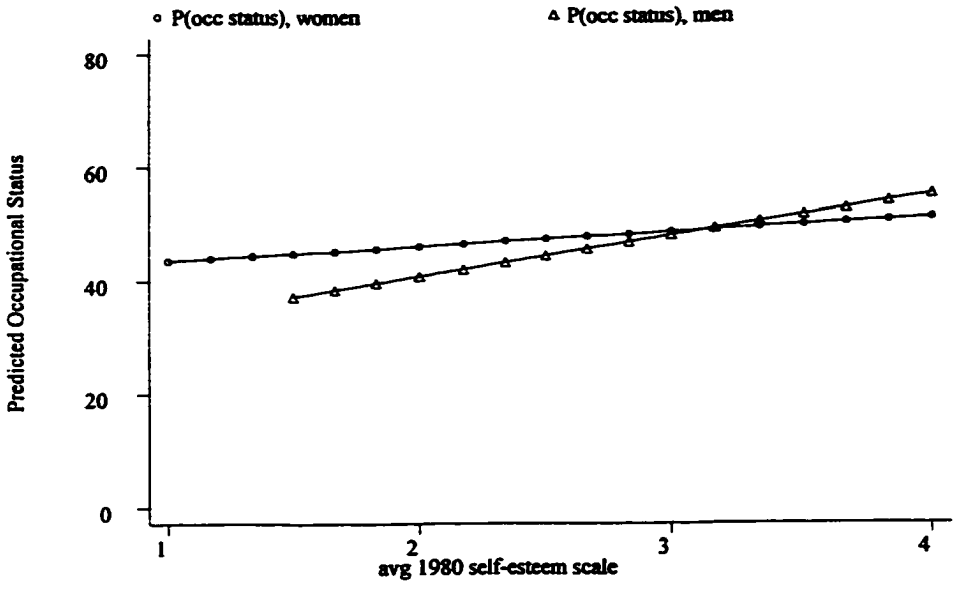


Figure 7.6. Predicted Occupational Status Attainment by Sex and Self-Esteem in Adolescence



The Long-Term Effects of Self-Esteem

In the previous section, I found that self-esteem affected some of women's and men's adult status outcomes. Does self-esteem continue to differentiate their experiences once I control for labor market conditions, school and family contexts, and other factors? To answer this question, I add measures of race, social context, academic achievement, and self-reported discipline problems to the regression equations that include sex and self-esteem.

Consistent with other "full model" analysis, I estimate separate models for women and men and include pooled sample results for comparison purposes. Recall that each of these outcomes was measured when the respondents' average age was twenty-eight years.

Once I controlled for race, labor market conditions, school context, family context, academic achievement, and discipline problems in school, the long-term effects of self-esteem were minimal. The significance test on the regression coefficient associated with self-esteem in Tables 7.6 – 7.9 indicate that self-esteem had a positive effect on young men's socio-economic achievements, but no effect for young women (see Tables 7.8 and 7.9). Young men benefited from having high self-esteem in tenth grade which eventually translated into higher educational attainment and higher status jobs in young adulthood. Young women received no such benefits from high self-esteem. For that matter, young women were not disadvantaged by low self-esteem. A test of the pairs of regression coefficients indicates that the difference in effect was not significant. Although self-esteem had a significant effect on men's socio-economic achievements, its influence was not substantially greater for men.

An examination of the influence of social context (and other factors) before and after the inclusion of self-esteem indicates that in some cases the effects changed. I draw specific attention to the occasions when the contextual and individual level factors no longer had a differential effect on women's and men's outcomes. These occasions imply that self-esteem mediates the influence of these factors and in turn affect the outcomes.

Comparing the effects of parental encouragement to attend college on women's family formation outcomes (see Table 6.3 and Table 7.6), I find that self-esteem mediated its influence and reduced the significant difference in effects to a non-significant level. Previously, parental encouragement to attend college had a greater effect on women's family formation. Controlling for self-esteem, the effect of parental encouragement to attend college was statistically the same for women and men. This implies that parental encouragement to attend college influenced women's family formation patterns by having an effect on women's self-esteem in adolescence. Young women with high self-esteem were less likely to form families by age 28.

Self-esteem also reduced the differential effects of family context on achieving residential independence (compare Tables 6.4 and 7.7). As noted earlier, family SES and father's education had a positive effect on self-esteem, and high self-esteem increased the likelihood of leaving home at least for men. Once self-esteem was controlled, none of these factors had an effect on establishment of an independent residence for women or men.

Even more revealing is the mediating effect of self-esteem on the socio-economic outcomes. Controlling for self-esteem changed the effects of discipline problems in school on women's educational attainment, teacher encouragement to attend college on

men's educational attainment, and parental monitoring of school progress on women's occupational status attainment (see Tables 6.5 – 6.6 and Tables 7.8 – 7.9). In each of these cases, the findings suggest that these factors affected adolescent girls' and boys' self-esteem. Then, self-esteem influenced the respective outcomes. For example, the change in effect indicates that teachers' encouragement and parental monitoring had a positive effect on the self-esteem of boys and girls, respectively. This in turn increased their achievements. In contrast, discipline problems in school decreased girls' self-esteem and lowered women's educational attainment. The mediating effect of self-esteem provides an explanation of how and why these factors affected women's and men's outcomes differently.

Summary

The findings in this chapter portray the complex relation between gender, self-esteem, and long-term achievements. On the one hand, self-esteem in adolescence had no long-term, direct effect on women's achievements whereas it was somewhat important to men's socio-economic achievements. These results beg the question, "Why?"

I would like to suggest that social institutions may reward young men and women with high self-esteem differently. Young men who "feel good about themselves," act confidently, and appear in control conform to expectations of what it means to be a man. As a result, men who fulfill these expectations encounter greater educational and occupational opportunities. My findings also indicate that men who do not meet these expectations have lower achievement and in some cases, their achievements were lower than women with low self-esteem. For men with high self-esteem, rising to the top is a

near guarantee. This explains their ability to translate self-esteem directly into socio-economic rewards.

For young women, I argue that a different process is at work. On the one hand, the message in the popular culture is "girls' self-esteem matters." Young women and their advocates attempt to boost girls' self-esteem believing that positive outcomes are forthcoming; much as they would be for men. As a result, parents provide girls with more attention, encourage academic achievement, and may even send their daughters to private schools hoping to boost their self-esteem and enhance their achievements. However, my findings indicate that the same process is not operating for young women. Girls' self-esteem does *not* convert directly into socio-economic benefits. As a result, I conclude that the AAUW's concern is overstated and somewhat misleading.

When we consider the effect of self-esteem, we also need to recognize how unimportant self-esteem was overall especially in light of the attention it has received in the popular culture. Except in the case of self-esteem's influence on men's occupational status attainment, the effect of self-esteem was marginally significant to the outcomes under study. And, the magnitude of the effect was not significantly different for women and men. In other words, self-esteem does not matter as much as the popular culture would have us believe.

This "weak" effect can be attributed to a number of factors. First, self-esteem may not have a real impact on these outcomes. Or, the weak effect may be related to issues of measurement. The measure itself was an abbreviated version of the Rosenberg scale and may be less reliable and valid than the full version. Global self-esteem is also a vague concept. The scale items may measure different factors for girls and boys. For girls, the

scale may be measuring social acceptance, body image, and date-ability. For boys, the scale may measure academic success and athletic prowess. Or, self-esteem may be more stable for boys and more transitory for girls. Obviously, there are a variety of measurement issues that could attenuate the effect of self-esteem. I suggest that future research focus on constructing a better measure of self-esteem and identify whether the constructs measured differ for girls and boys.

Table 7.6. Probit Analysis of Family Formation on Social Contexts and Self-Esteem by Sex

	Model 1 Union Formation			Model 2 Parental Status		
	Pooled	Females	Males	Pooled	Females	Males
Sex (1 = female)	.442***			.456***		
	(.057)			(.057)		
Race (1 = Black)	-.752***	-1.07***	-.427*	-.001	-.111	.166
	(.128)	(.170)	(.183)	(.124)	(.163)	(.185)
Self-esteem	.084	.140	.078	.056	-.000	.150
	(.066)	(.090)	(.097)	(.065)	(.088)	(.101)
Discipline problems in school	.053	.052	.066	.230**	.270*	.239*
(1 = yes)	(.079)	(.121)	(.106)	(.078)	(.114)	(.107)
Academic achievement	-.004***	-.005**	-.003	-.006***	-.007***	-.005**
	(.001)	(.002)	(.002)	(.001)	(.002)	(.002)
Labor Market Conditions						
County unemployment, 1982	.001	-.005	.010	-.002	-.007	.006
	(.008)	(.011)	(.012)	(.008)	(.010)	(.012)
School Context						
% Black teachers	.001	-.002	.006	-.000	-.002	.002
	(.005)	(.006)	(.007)	(.005)	(.006)	(.007)
% Black students	-.002	.001	-.005	-.003	-.002	-.005
	(.003)	(.005)	(.005)	(.003)	(.004)	(.005)
% Female teachers	.003	.003	.004	.002	-.000	.005
	(.003)	(.004)	(.004)	(.003)	(.004)	(.004)
% Female students	-.005*	-.003	-.006	-.006*	.002	-.012*
	(.003)	(.004)	(.005)	(.003)	(.004)	(.005)
Avg. school SES	-.379***	-.476***	-.267	-.283**	-.229	-.352*
	(.110)	(.149)	(.164)	(.110)	(.143)	(.173)
Catholic (1 = catholic)	.099	.127	.020	-.079	-.283	-.116
	(.092)	(.162)	(.157)	(.094)	(.159)	(.173)
Private (1 = private)	.006	.065	-.090	-.355	-.690**	-.109
	(.174)	(.233)	(.264)	(.205)	(.262)	(.330)
Avg. parental participation	-.111	-.253**	.001	.000	.019	-.007
	(.070)	(.098)	(.105)	(.072)	(.094)	(.112)
Log students/teacher	.044	.106	-.040	-.133	-.044	-.245
	(.072)	(.091)	(.112)	(.081)	(.099)	(.128)
Teachers' encouragement to	-.008	-.087	.058	.042	.081	.010
attend college (1 = yes)	(.059)	(.081)	(.085)	(.059)	(.078)	(.091)
Best friend plans to attend	-.035	-.062	-.022	-.101	-.172	-.041
college (1 = yes)	(.066)	(.095)	(.092)	(.065)	(.089)	(.094)
New England/Mid Atlantic	-.388***	-.344**	-.436***	-.301***	-.245*	-.360**
	(.091)	(.127)	(.132)	(.090)	(.119)	(.140)
Central	-.101	-.044	-.152	-.127	-.107	-.117
	(.088)	(.123)	(.126)	(.083)	(.111)	(.126)
Mountain/Pacific	-.038	-.126	.027	.097	.002	.225
	(.108)	(.153)	(.152)	(.106)	(.141)	(.158)
Urban	-.064	-.279*	.083	-.031	-.205	.097
	(.094)	(.130)	(.135)	(.093)	(.124)	(.141)
Suburban	-.136*	-.190*	-.106	-.087	-.204*	.024
	(.067)	(.091)	(.099)	(.066)	(.087)	(.104)
Family Context						
Single parent family	.028	-.063	.010	.045	.151	-.058
	(.086)	(.114)	(.129)	(.086)	(.111)	(.134)
Number of siblings	.026*	.024	.026	.024*	.040*	.010
	(.012)	(.018)	(.017)	(.012)	(.018)	(.017)
Grandparents in household	-.028	-.108	.101	.097	.084	.105
(1 = yes)	(.127)	(.169)	(.187)	(.130)	(.181)	(.186)
Family SES	.001	.003	.000	-.001	-.002	-.001
	(.002)	(.002)	(.003)	(.002)	(.002)	(.003)
Mother's education	-.002	-.041	.028	-.013	-.013	-.010
	(.016)	(.022)	(.023)	(.016)	(.021)	(.024)
Father's education	-.039*	-.036	-.041	-.055***	-.062**	-.051*
	(.015)	(.021)	(.022)	(.015)	(.021)	(.023)
Parents' encouragement to attend	-.093*	-.164**	-.045	-.125***	-.194***	-.072
college	(.037)	(.054)	(.053)	(.037)	(.051)	(.054)
General supervision	.131	.073	.167	.032	.071	.015
	(.077)	(.120)	(.100)	(.079)	(.116)	(.106)
Monitoring of school progress	.107*	.128*	.111	.040	.083	.003
	(.046)	(.063)	(.069)	(.046)	(.061)	(.070)
Constant	.410	1.00*	.166	.999**	1.25*	.911
	(.361)	(.489)	(.551)	(.374)	(.499)	(.566)
Pseudo R^2	.08	.11	.05	.11	.13	.08
χ^2	289.62 (31)	201.87 (30)	81.77 (30)	377.23 (31)	254.08 (30)	118.74 (30)
	P < .001	P < .001	P < .001	P < .001	P < .001	P < .001
N	3671	1966	1705	3671	1966	1705

*p < .05 **p < .01 ***p < .001 Note: All standard errors are robust estimates calculated using Taylor series linearization approximations. Likelihood ratio test of model equivalence for union formation (-2LL = 165.92 (31), p < .001). Likelihood ratio test of model equivalence for parental status (-2LL = 153.04 (31), p < .001).

Table 7.7. Probit Analysis of Residential Independence on Social Contexts and Self-Esteem by Sex

	Pooled	Females	Males
Sex (1 = female)	.321***		
	(.066)		
Race (1 = Black)	-.409**	-.483**	-.343
	(.132)	(.177)	(.199)
Self-esteem	.028	-.053	.138
	(.080)	(.111)	(.117)
Discipline problems in school	.103	.034	.158
(1 = yes)	(.091)	(.130)	(.125)
Academic achievement	.003**	.004*	.002
	(.001)	(.002)	(.002)
Labor Market Conditions			
County unemployment, 1982	.007	.006	.008
	(.008)	(.011)	(.013)
School Context			
% Black teachers	.001	-.003	.004
	(.005)	(.007)	(.007)
% Black students	-.002	-.003	-.001
	(.004)	(.005)	(.006)
% Female teachers	.000	.004	-.003
	(.003)	(.004)	(.005)
% Female students	-.004	-.009	.003
	(.003)	(.005)	(.005)
Avg. school SES	-.097	-.244	.063
	(.128)	(.173)	(.190)
Catholic	-.066	.089	-.096
	(.105)	(.195)	(.185)
Private	-.054	.416	-.209
	(.210)	(.285)	(.303)
Avg. parental participation	-.054	-.157	.040
	(.084)	(.108)	(.127)
Log students/teacher	-.144	-.107	-.202
	(.084)	(.107)	(.138)
Teachers' encouragement to attend	.025	.021	.009
college (1 = yes)	(.068)	(.094)	(.102)
Best friend plans to attend college	-.060	-.084	-.016
(1 = yes)	(.074)	(.105)	(.106)
New England/Mid Atlantic	-.166	-.238	-.123
	(.098)	(.144)	(.138)
Central	.027	-.108	.135
	(.094)	(.137)	(.135)
Mountain/Pacific	-.079	-.184	-.001
	(.122)	(.172)	(.175)
Urban	-.004	-.043	.024
	(.107)	(.154)	(.153)
Suburban	-.044	-.070	-.025
	(.076)	(.102)	(.113)
Family Context			
Single parent family	.050	.125	-.020
(1 = yes)	(.102)	(.141)	(.150)
Number of siblings	.036*	.018	.053*
	(.015)	(.020)	(.022)
Grandparents in household	-.123	-.198	-.024
(1 = yes)	(.138)	(.179)	(.210)
Family SES	.002	-.000	.005
	(.002)	(.003)	(.003)
Mother's education	.002	-.023	.017
	(.019)	(.026)	(.028)
Father's education	.016	.042	-.008
	(.018)	(.024)	(.027)
Parents' encouragement to attend	-.038	-.059	-.011
college	(.043)	(.059)	(.062)
General supervision	.055	-.033	.064
(1 = yes)	(.086)	(.134)	(.113)
Monitoring of school progress	.004	.013	-.005
	(.053)	(.073)	(.078)
Constant	1.04*	2.06***	.334
	(.416)	(.581)	(.651)
Pseudo R^2	.04	.05	.04
χ^2	79.34 (31)	63.67 (30)	37.25 (30)
	P < .001	P < .001	P < .17
N	3782	2033	1749

*p < .05 **p < .01 ***p < .001 Note: All standard errors are robust estimates calculated using Taylor series approximations. Likelihood ratio test of model equivalence (-2LL = 89.74 (31), p < .001).

Table 7.8. Ordered Probit Analysis of Educational Attainment on Social Contexts and Self-Esteem by Sex

	Pooled	Females	Males
Sex (1 = female)	.015		
	(.050)		
Race (1 = Black)	.175	.301*	.075
	(.108)	(.140)	(.164)
Self-esteem	.095	.022	.161+
	(.059)	(.081)	(.084)
Discipline problems in	-.318***	-.449***	-.255**
school (1 = yes)	(.071)	(.111)	(.092)
Academic achievement	.015***	.016***	.015***
	(.001)	(.001)	(.002)
Labor Market Conditions			
County unemployment,	.011	.007	.017
1982	(.006)	(.008)	(.010)
School Context			
% Black teachers	-.004	-.004	-.006
	(.004)	(.006)	(.005)
% Black students	.006*	.006	.007
	(.003)	(.004)	(.004)
% Female teachers	-.005	-.003	-.006
	(.003)	(.003)	(.004)
% Female students	.003	.002	.002
	(.002)	(.003)	(.004)
Avg. school SES	.207*	.306*	.111
	(.092)	(.120)	(.140)
Catholic	.098	.203	-.054
	(.079)	(.130)	(.143)
Private	.012	.254	-.257
	(.185)	(.204)	(.286)
Avg. parental	.242***	.151	.345***
participation	(.063)	(.083)	(.094)
Log students/teacher	-.003	.022	-.066
	(.062)	(.077)	(.098)
Teachers' encouragement	.164***	.094	.248***
to attend college (1= yes)	(.051)	(.067)	(.077)
Best friend plans to attend	.224***	.349***	.120
college (1 = yes)	(.056)	(.079)	(.077)
New England/	.164*	.241*	.096
Mid Atlantic	(.080)	(.105)	(.116)
Central	.098	.149	.047
	(.073)	(.093)	(.110)
Mountain/Pacific	-.315***	-.095	-.522***
	(.091)	(.125)	(.129)
Urban	-.149	-.197	-.066
	(.087)	(.117)	(.132)
Suburban	-.011	-.125	.136
	(.058)	(.075)	(.090)

Table 7.8 continued.

	Pooled	Females	Males
Family Context			
Single parent family	-.078	-.121	-.002
(1 = yes)	(.086)	(.103)	(.131)
Number of siblings	-.037***	-.045**	-.030
	(.011)	(.014)	(.016)
Grandparents in the	-.143	-.149	-.105
household (1 = yes)	(.103)	(.146)	(.148)
Family SES	.002	.004	.000
	(.002)	(.002)	(.002)
Mother's education	.040**	.043*	.035
	(.014)	(.018)	(.020)
Father's education	.062***	.046*	.080***
	(.014)	(.019)	(.020)
Parents' encouragement to	.224***	.231***	.212***
attend college	(.033)	(.045)	(.047)
General supervision	.184*	.216*	.138
(1 = yes)	(.072)	(.123)	(.085)
Monitoring of school	-.069	-.104*	-.030
progress	(.038)	(.050)	(.060)
Thresholds			
< HS diploma/HS diploma	.267	-.036	.403
	(.315)	(.422)	(.492)
HS diploma/Certificate	2.39***	2.27***	2.41***
	(.313)	(.422)	(.487)
Certificate/	2.69***	2.60***	2.69***
Associate's degree	(.313)	(.422)	(.485)
Associate's degree/	3.01***	2.98***	2.95***
Bachelor's degree	(.314)	(.424)	(.486)
Bachelor's degree/	4.63***	4.64***	4.57***
Advanced degree	(.320)	(.435)	(.491)
Pseudo R^2	.16	.17	.15
χ^2	1077.69 (31)	699.61 (30)	540.73 (30)
	$p < .001$	$p < .001$	$p < .001$
N	3766	2029	1737

$^{\cdot}p < .10$ $^{*}p < .05$ $^{**}p < .01$ $^{***}p < .001$ Marginal effects denoted for self-esteem only. Note: All standard errors are robust estimates calculated using Taylor series linearization approximations. Likelihood ratio test of model equivalence (-2LL = 87.38 (35), $p < .001$).

Table 7.9. OLS Regression of Occupational Attainment on Social Contexts and Self-Esteem by Sex

	Pooled	Females	Males
Sex (1 = female)	-.400		
	(1.05)		
Race (1 = Black)	-.039	1.65	-2.27
	(2.35)	(3.39)	(3.31)
Self-esteem	2.24*	1.05	3.87*
	(1.21)	(1.70)	(1.71)
Discipline problems in school	-4.40**	-5.43*	-3.17
(1 = yes)	(1.45)	(2.21)	(1.97)
Academic achievement	.135***	.112***	.158***
	(.022)	(.030)	(.032)
Labor Market Conditions			
County unemployment, 1982	-.031	-.199	.164
	(.138)	(.200)	(.188)
School Context			
% Black teachers	-.124	-.210	-.022
	(.080)	(.119)	(.104)
% Black students	.040	.069	-.003
	(.064)	(.092)	(.086)
% Female teachers	-.093	-.094	-.100
	(.049)	(.068)	(.071)
% Female students	.057	-.049	.095
	(.050)	(.083)	(.083)
Avg. school SES	1.42	.473	2.31
	(2.04)	(2.82)	(2.98)
Catholic	5.69***	11.49***	2.53
	(1.72)	(3.15)	(2.79)
Private	.463	3.98	-3.38
	(3.80)	(5.47)	(4.92)
Avg. parental participation	-1.13	-1.63	.206
	(1.34)	(1.87)	(1.87)
Log students/teacher	-1.86	-.577	-3.33
	(1.30)	(1.58)	(2.13)
Teachers' encouragement to attend	.641	.145	1.35
college (1 = yes)	(1.15)	(1.62)	(1.64)
Best friend plans to attend college	1.67	2.27	1.41
(1 = yes)	(1.17)	(1.80)	(1.54)
New England/Mid Atlantic	-1.01	-2.07	-.032
	(1.72)	(2.50)	(2.29)
Central	-.960	-2.19	-.375
	(1.54)	(2.22)	(2.11)
Mountain/Pacific	-6.05**	-8.01**	-4.59
	(1.96)	(2.77)	(2.71)
Urban	-2.24	-3.33	-.681
	(1.69)	(2.48)	(2.32)
Suburban	-.417	-3.00	2.87
	(1.22)	(1.76)	(1.71)
Family Context			
Single parent family	-.425	-.100	-.909
(1 = yes)	(1.67)	(2.36)	(2.34)
Number of siblings	-.463*	-.713*	-.229
	(.229)	(.361)	(.290)
Grandparents in the household	2.00	1.79	2.46
(1 = yes)	(2.18)	(3.20)	(2.86)
Family SES	.081*	.087	.084
	(.033)	(.050)	(.044)
Mother's education	-.096	-.514	.230
	(.290)	(.427)	(.393)
Father's education	-.066	-.220	.070
	(.294)	(.436)	(.397)
Parents' encouragement to attend	3.80***	4.14***	3.28***
college	(.681)	(1.01)	(.936)
General supervision	3.07*	3.41	2.85
	(1.41)	(2.35)	(1.73)
Monitoring school progress	-.251	.794	-1.47
	(.854)	(1.20)	(1.19)
Constant	35.49***	45.87***	26.24**
	(6.51)	(8.98)	(9.91)
R^2	.12	.10	.16
F	12.24	6.07	8.35
	(31, 3676)	(30, 1944)	(30, 1702)
	P < .001	P < .001	P < .001
N	3708	1975	1733

*p < .10 *p < .05 **p < .01 ***p < .001 Marginal effect denoted for self-esteem only. Note: All standard errors are robust estimates calculated using Taylor series linearization approximations. Chow test of model equivalence (F (31, 3646) = .531, p > .50). Goldfeld Quandt test (F (1944, 1702) = 1.22, p < .001).

CHAPTER 8

A LOOK AT RACE DIFFERENCES: ELABORATING WOMEN'S AND MEN'S EXPERIENCES

Recently, gender theorists have argued that we need to explore the ways in which race, ethnicity, class, national origin, and sexual orientation differentiate women's and men's experiences. This implies that gender is not the only social category that organizes social experiences and processes. Rather, membership in other social categories may shape the experiences of women and men differently. In this chapter, I elaborate the findings of the previous chapters by focusing on the importance of race. When does race matter to the transition to adulthood? When do race and sex interact to affect young adult experiences? I answer these questions in the first section of this chapter by systematically reviewing the models from the previous chapters and discussing when race differences occurred after controlling for other factors.

The literature on neighborhood and school contexts suggests that the racial composition of the schools (neighborhoods) also influence young adult outcomes. Since the effects of race and poverty are often confounded, these studies frequently separate measures of school (neighborhood) wealth from measures of racial composition. Doing this enables us to determine whether racial composition has an influence independent of socio-economic status. Does the proportion of Black teachers affect women's and men's outcomes differently? Does the proportion of Black students have a different effect for

women and men? Studies of the interaction between sex and school racial composition are few. The findings in the second section of this chapter address that gap in the literature.

To determine whether and when race had an effect, I examine the hypothesis test associated with the variable for race in each of the subgroup models. If the regression coefficient for race was statistically significant for both women and men, I conclude that race had a consistent effect on the outcomes net of other factors. I also test whether the effect of race was significantly different for women and men. In other words, is the racial gap in outcomes greater for Black and White women or Black and White men? In some cases, race had a significant effect for one group but not the other, and the difference was not significant. This suggests that race influences the outcomes of one group, but the gap between racial groups is not larger for women relative to men (or vice versa).

The Influence of Race at the Individual Level

In Table 8.1, I tabulated the race differences from each of the models I tested in Chapters 5 through 7. Each model included controls for social context and other factors. Comparing women's and men's experiences, I conclude that there was a consistent race effect across three outcomes: the age at which a first birth was expected, the age at which a first marriage was expected, and the level of education the respondents expected to achieve. Black adolescents expected to marry later and have children earlier than White adolescents. Black adolescents also had higher educational attainment expectations.

Race differences in marital timing expectations reflect may reflect an awareness that marriage opportunities for Blacks are limited. This would be consistent with the marriageable male pool theory put forth by Wilson (1987). According to this theory,

urban Black women are less likely to marry when there are few "marriageable" (employed) Black men. If Black adolescent girls realize that their prospects for marriage are few, they would expect to delay marriage. Black adolescent boys might also expect to delay marriage if they do not anticipate being able to support a family. Yet, the higher educational expectations of Blacks relative to Whites and their equivalent occupational status expectations suggest that they do not perceive a more limited future than White youth.

Consequently, Black family formation may have less to do with perceived opportunities and more to do with interest in marriage. South (1993) finds that Black youth are less interested in marriage than White youth. Among young women, this association was explained by educational differences. Black women had lower educational attainment levels. Women with lower educational attainment levels were less interested in marriage. Among young men, Blacks' concern that marriage would limit their sex life and time spent with friends explained their lack of interest in marriage. Additionally, Anderson (1991) and Liebow (1967) argue that the relations between urban Black men and women are fraught with suspicion, competing interests, and sexual exploitation. Under these circumstances, it is no wonder that Blacks are reluctant to marry or prefer to postpone marriage.

The racial differences in expected timing of childbearing would imply that Blacks expect fewer educational and occupational opportunities and opt to achieve adult status by becoming parents earlier than Whites (Anderson 1991; MacLeod [1987] 1995; Wilson 1996). However, Blacks had higher educational expectations than Whites. This leads me to conclude that Blacks perceive *greater* opportunities relative to Whites. Instead, I argue

that Blacks may also perceive greater support from family and choose to combine parenting, school, and work roles earlier than Whites because they can rely on family to care for their children.

The race differences in educational expectations may reflect the greater likelihood for White youth to drop out of high school relative to Black youth (Mayer 1991). White youth who drop out may have lower educational expectations than Black youth. As a result, this would lower the overall educational expectations of White adolescents. Or, these differences in educational expectations are related to the greater proportion of Blacks who are placed in the academic track relative to Whites (Gamoran and Mare 1989). Youth who enroll in the academic track typically have higher educational expectations than youth in vocational and non-college bound (general) tracks. A third possibility exists. Black youth may believe that affirmative action policies and protective legislation create additional educational opportunities for them. They may anticipate taking advantage of these opportunities which are not available to White males. As a result, their educational expectations would exceed White men's expectations and would be equal to those of White women who can also capitalize on these opportunities. The slightly smaller gap between Black and White women's educational expectations provides some support for this (see Table 5.1).

Although intriguing, these racial differences in expectations do not materialize in terms of adult outcomes. Instead, I find that by age 28, Black women were more likely to be single than White women whereas Black and White men were equally likely to be married or cohabiting. This race and sex interaction was significant. Thus, Black men do not postpone marriage (or cohabitation) longer than White men even though they

expected to do so. If Black men's lack of interest in marriage were stable over time, we would expect fewer to marry. Clearly other factors have intervened to prompt their entrance into marriage. These unmeasured factors do not appear to increase Black women's chances of marrying.

Black men were also more likely to be fathers than White men whereas Black and White women were equally likely to be mothers. Although this race and sex interaction was significant, once self-esteem was controlled the difference was no longer significant. Instead, Blacks and Whites were equally likely to be parents by age 28 controlling for self-esteem and other factors. The change in the effect of race suggests how race and self-esteem affect becoming a father. Black adolescents had higher self-esteem than White adolescents and men with high self-esteem in adolescence were less likely to be fathers. When Black and White men with similar levels of self-esteem were compared, they were equally likely to be fathers. The equal likelihood of Black and White women to be mothers by age 28 is consistent with Black women's "early" childbearing expectations. However, this also indicates that White women do not delay childbearing substantially longer than Black women even though they expected to do so. Once married, White women may feel increased pressure to have a child and follow through sooner than they planned.

In terms of educational attainment, Black women had higher educational attainment than White women although the gap in educational attainment was not significantly different compared with the gap in Black and White men's educational attainment. What do we make of this? It appears that only Black women were able to translate their higher educational expectations into attainment. Black men achieved the

same amount of schooling as White men. If we apply Brinton's (1988) theory of human capital development, Black families may be more likely to invest in a daughter's education than a son's because Black women have traditionally been more successful at obtaining employment than Black men. On the other hand, White families may invest in sons because White men have a greater variety of job opportunities relative to White women. However, this does not explain why Black and White men achieved similar levels of education net of other factors. This finding seems to indicate that when Black and White men have attended similar schools and come from similar families, race does not matter to their educational accomplishments. The factors that contribute to race and gender differences in educational attainment warrant further study.

The last race and sex interaction pertained to self-esteem. Black adolescent girls and boys had higher self-esteem than their White counterparts. However, the difference in self-esteem between Black and White adolescent girls was greater than the difference between Black and White adolescent boys ($p < .10$). Race differences in self-esteem have been reported consistently in the literature (e.g., AAUW 1991; Gecas and Burke 1995; Porter and Washington 1993, Rosenberg [1965] 1989). Yet, the source of those differences is hotly debated. Some argue that Blacks base their self-esteem on their relationships in the Black community as opposed to accepting the dominant (White) group's negative evaluation of Blacks (Rosenberg [1965] 1989).

Even more specifically, others argue that Black girls reject predicating their self-esteem on school success and are able to protect their sense of self worth as a result (Greenberg Lake Analysis Group 1990). The latter argument implies that White girls' self-esteem derives from academic success and it assumes that Black girls do not value

excelling in school. Given my finding that Black women achieved higher levels of education relative to White women, this argument appears suspect. The argument also does not explain why White adolescent boys would have lower self-esteem than Black adolescent boys net of other factors.

If Black youth were more likely to reside in northern, urban, segregated areas, then we might conclude that the culture of segregation influenced Blacks' self-esteem causing them to reject White values and norms and inflate their sense of self-worth (Massey and Denton 1993). However, 63% of the Black respondents in this study were from the South and 39% of those were living in rural areas. Additional research needs to determine the factors that contribute to these gender and race differences in self-esteem.

Above, I mentioned one of the statistically ambiguous race and sex effects as it related to educational attainment. The establishment of an independent residence was equally ambiguous. Although Black women were more likely to reside with their family of origin than White women, this racial difference was not significantly different from the racial difference in men's achievement of residential independence. Since Black women were less likely to marry and marriage is often the reason young adults leave home, then this race difference in women's home leaving patterns makes sense. In contrast, Black and White men were equally likely to marry or cohabit. This may cause the similarity in home leaving patterns that I detected for White and Black men. Given that the proportion of Black women who remained home (compared with White women) was no greater than the proportion of Black men who remained home (compared with White men), I assume that Black women would leave home if union formation were an option.

Clearly, these associations need to be investigated further. Why do Blacks have higher self-esteem than Whites? What factors enhance Black women's educational attainment over that of White women? How is the development of plans for the future different for Black and White youth? Additional study of these processes would enhance our understanding of the factors that contribute to these gender and race differences.

The Independent Effect of School Racial Composition

In addition to examining the effect of race at the individual level, I explore whether a school's racial composition had a different effect on women's and men's outcomes. School racial composition refers to the percentage of Black teachers and the percentage of Black students in the school. The findings in this section refer to results reported in Chapters 5 through 7. I reviewed whether either variable influenced the outcomes of women and men differently. Of the models that included these measures, only one outcome was affected by the racial composition of the school. In this case, the percentage of Black teachers had a negative effect on women's occupational status before controlling for self-esteem, but no effect on men's occupational status. Once girls' self-esteem was controlled, the effect disappeared.

The distribution of the percentage of Black teachers in the schools that girls attend is highly skewed. Ninety percent of adolescent girls attended schools whose teaching staff was less than twenty-five percent Black. The distribution by race of the adolescent girls is even more revealing. Ninety percent of White adolescent girls attended schools with 13% or fewer Black teachers whereas 90% of Black adolescent girls attended schools with 68% or fewer Black teachers. Consequently, the negative effect of the

percentage of Black teachers on women's occupational status is not very meaningful. It appears to be an artifact of the distribution.

Controlling for other factors, I find that the racial composition of the school has a similar effect on women's and men's outcomes—there is no effect. Another way to think about this is attending a school with a high percentage of Blacks does not have a detrimental impact on women's and men's outcomes.

Table 8.1. Race Differences in the Transition to Adulthood

Endogenous Variable	Controlling for other factors:
Consistent Race Effects	
Age at which 1st child is expected	Black youth expected to have a child earlier than White youth.
Age at which 1st marriage is expected	Black youth expected to marry later than White youth.
Educational expectations	Black youth had higher educational expectations than White youth.
Significant Race and Sex Interactions	
Union formation	Black women were less likely to marry or cohabit than White women. Race had no effect on men's likelihood of union formation. This was true after controlling for self-esteem as well.
Parental status	Black men were more likely to have a child than White men. Race had no effect on women's likelihood of being a mother. This was true before controlling for self-esteem.
Self-esteem	Black adolescents had higher self-esteem than White adolescents, but race was more important to girls' self-esteem than boys'.
Ambiguous Race and Sex Interactions	
Educational attainment	Black women had higher educational attainment than White women. The differential effect of race on women's and men's achievement was not significant. This was true after controlling for self-esteem as well.
Residential independence	Black women were more likely to reside with their family of origin than White women. However, the differential effect of race on women's and men's residential independence was not significant. This was true after controlling for self-esteem as well.

CHAPTER 9

THE GENDERING OF THE TRANSITION TO ADULTHOOD

Most gender studies begin with the assumption that women and men are treated differently. Often, this differential treatment causes women and men to acquire different resources and achieve different outcomes. The value that we give to these resources and outcomes determines which group is disadvantaged relative to the other. Studies of this nature typically focus on the experiences of adult women and men. The gender stratification literature serves as an example. Gender theory and research on the experiences of children usually emphasize socialization with an eye toward what it means to be an adult woman or man. However, neither perspective sheds light on the gendering of the transition to adulthood for a population of youth. Filling that void is the contribution of my research.

In the next section of this chapter, I discuss the relation between gender and the transition to adulthood ranging from plans for the future to adult status outcomes. Is the transition to adulthood gendered? Given that the past thirty years of social and political changes have created more opportunities for women, we cannot presume that adolescent girls are consistently disadvantaged as they become adults. Rather, I review the cumulative evidence found in the previous chapters to determine whether and how the transition to adulthood is gendered.

Answering this question requires me to examine individual experiences as well as the social processes and contexts that shape these experiences. Which transitions are gendered? Which contexts gender the transitions? By using gender as an adjective and a verb, I imply that social institutions actively construct differences between adolescent girls and boys (later women and men) by having a different effect on their experiences. I identify which transitions are gendered and which contexts are more likely to create a gendered process.[71]

In the second section, I discuss the import of my findings for gender theory. Specifically, I provide a starting point for a theory of the transition to adulthood as a gendered process. In the final section, I discuss the social policy and future research implications of my work.

Cumulative Evidence of the Transition to Adulthood as a Gendered Process

As discussed in Chapter 1, gender theorists assert that gender pervades all social processes and institutions (Acker 1992; Alway 1995). Although this may be true, other theorists claim that the importance of gender depends on the historical context and the setting (Brinton 1988; Connell 1987; Thorne 1993). This dissertation has addressed these competing claims by focusing on the transition to adulthood. Is the transition to adulthood gendered? Does social context have a consistent and different effect for young women and men? Gender inequality usually means that women are disadvantaged relative to men. In the case of my work, are adolescent girls uniformly disadvantaged as they become adults?

[71] The transitions could also be gendered if adolescent girls and boys respond differently to social context. Differential responses may derive from two sources: differential socialization that conditions these responses (e.g., operant conditioning) or biological differences. These are alternative explanations for my

The empirical evidence that I presented in earlier chapters indicates that some aspects of the transition to adulthood are gendered. From this analysis, I reach the following conclusions. Contrary to what we would have expected, I find that the expected timing of childbearing and educational plans are not inter-dependent for adolescent girls. However, the influence of marital timing plans on the timing of childbearing plans is significantly different for girls and boys. I also conclude that individual aspects of social context gender family formation and educational plans; occupational plans are less likely to be gendered. With regard to the adult outcomes, my findings indicate that school context is more likely to gender socio-economic outcomes, and family context is more likely to gender family formation. In addition, I find that self-esteem in adolescence is relatively unimportant to adult outcomes.

As a result, I assert that gender does not ubiquitously organize the transition to adulthood as put forth by the premise that "gender is the pervasive ordering of human activities, practices, and social structures" (Acker 1992, p. 567). Rather, the influence of gender is nuanced. In addition, I find that young women were not consistently disadvantaged. Certain aspects of social context actually enhanced their outcomes over those of young men.

Previous research on young women's work and family plans found that these were inter-related (Waite and Stolzenberg 1976). Planning to be employed at age 35 significantly reduced the number of children women expected to bear. Each additional child that a woman expected to bear decreased the likelihood that she planned to be employed at age 35. A generation later, **the young women in my study showed no**

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findings that I cannot test with the data I have. Nevertheless, if biological differences were the explanation, I should detect more differential effects than I do.

evidence that educational plans and the expected timing of childbearing were inter-dependent. Rather, the effect of these plans on each other was insignificant for both girls and boys. The analysis presented in Chapter 5 focused on the inter-dependence of educational and childbearing plans. Yet, as mentioned in footnote 52, even when I included the timing of childbearing as a predictor of occupational plans, it had no effect for adolescent girls or boys. Along with the findings presented in Table 5.4, I conclude that occupational status expectations and the expected timing of childbearing were not inter-dependent either. What has changed?

As discussed in Chapter 3, women's labor force participation has increased steadily and more mothers of young children are working. Although adolescent girls may have observed their mothers and other women combining these roles during the 1980s, their own plan to "do it all" may be unrealistic. Research shows that early childbearing has a negative impact on women's educational attainment (Marini 1984) and numerous studies find that working women spend more time doing household labor and caring for children than men (e.g., Hochschild 1989). Thus, the adolescent girls of this cohort may believe that women can combine work and family, but they do not appear to grasp the implications as evidenced by the finding that the interdependence of plans is the same for girls and boys.

I also find that adolescent **girls' and boys' marital timing expectations had a significantly different effect on expected timing of childbearing.** When adolescent girls expected marriage to occur later in their life, they expected childbearing to happen sooner compared with the timing that adolescent boys expected. Adolescent boys expected childbearing to occur at a later point after marriage compared with adolescent

girls. What I conclude is that adolescent girls who expect to marry later are cognizant of their "biological clock" and anticipate childbearing to occur shortly after marriage. On the other hand, adolescent boys do not perceive the same time limit on fathering a child. This suggests that adolescent girls perceive a different set of constraints when they intend to delay marriage.

How do my other findings influence our understanding of gender and the transition to adulthood? In terms of the plans for the future, the cumulative evidence reveals that **family formation and educational plans were more likely to be gendered by social context than occupational plans.** For instance, living in an urban area as opposed to a rural area significantly diminished adolescent girls' educational plans relative to adolescent boys' plans. And, perceived parental encouragement to attend college significantly increased the amount of schooling boys expected to complete over that of girls. Communities and perceived parental support shape adolescent girls' and boys' educational plans differently. In both cases, adolescent girls appear disadvantaged. However, these factors did not translate into lower educational attainment for women. Young women were able to overcome these sources of influence. In this dissertation, I had conflicting evidence that occupational plans were gendered. Consequently, it is not clear whether the process associated with occupational planning is different for adolescent girls and boys.

As mentioned previously, the factors that diminished adolescent girls' educational expectations did not significantly reduce their educational attainment relative to boys. I also find several patterns suggesting that **school context was more likely to shape socio-**

economic attainment differently for women and men. In contrast, family context was more likely to gender the family formation outcomes.

For instance, the positive effect of perceived teacher encouragement to attend college on young men's educational attainment (after controlling for perceived parental and peer encouragement) indicates that young men's educational achievements were heavily influenced by authority figures—more than young women's educational achievements. Why would this be the case? In the United States and several other western countries, schoolwork is considered a "feminine" activity, especially in the lower grades (Connell 1997; Connell, Ashenden, Kessler and Dowsett 1982; Mickelson 1989). Boys who express a fondness for schoolwork do so at the risk of being labeled a "girl." The risk becomes even greater when boys take an interest in "feminine" subjects such as reading, writing, drama, and music. Under these circumstances, adolescent boys' educational achievements may be more sensitive to and benefit from extra encouragement to attend college particularly when it comes from a person in authority.

Although young women did not receive the same advantages from perceived teacher encouragement to attend college, attending a Catholic high school had a greater, positive influence on their occupational status relative to the achievements of young men. How do I explain this? In a previous chapter, I suggested that women who attend Catholic schools may enter the job market earlier than women from public schools. As a result, female Catholic school students would have an advantage, climb the internal job market ladder earlier, and achieve higher status jobs. Or, Catholic schools encourage deference and an ability to accept constructive criticism which are rewarded in terms of promotions to higher status jobs. Parental monitoring of school progress had a similar

effect for young women (and no effect for young men) suggesting that the same qualities are likely to be involved. If young women are more willing and more likely to embody these attitudes and behaviors, then they have found a way to increase their occupational status over that of men's.

With respect to the family formation outcomes, parental encouragement to attend college had a consistent effect on women's family formation. The greater the encouragement to attend college, the less likely women were to be married (or cohabiting) and mothers. Parental encouragement to attend college had no effect on men's family formation. I argue that parents' encouragement to attend college gives young women the incentive they need to pursue options besides family formation. The positive effect of this encouragement on women's socio-economic attainment suggests that women trade family formation for educational and occupational achievement at least at this stage in their lives. However, it is important to note that parental encouragement to attend college had the same positive effect on men's socio-economic achievements. Since men on average do not confront the same conflict—needing to choose between family and education or work—they do not experience an added benefit from parental encouragement to attend college in terms of delayed family formation.

The current discussion in the popular culture suggests that girls' low self-esteem is detrimental to their psychological well-being and later achievements. After controlling for the influence of social context, I find that **self-esteem in adolescence was relatively unimportant to adult outcomes.** When self-esteem had an effect, it only influenced young men's socio-economic achievements. This leads me to conclude that the concern with adolescent girls' lower self-esteem is overstated.

My review of these findings demonstrates how social context contributes to the gendering of plans for the future and the adult status transitions, and when gender was less important. Yet, the differential effects of social context (and other factors) are not as numerous or as consistent as we might have expected given that gender is depicted as a pervasive, organizing framework that is embedded in all social processes and institutions. How do these findings inform gender theory?

Implications for Gender Theory

Gender theory encompasses numerous divergent perspectives that are unified by a broad goal, to explain why and how women's and men's experiences differ. More recent theoretical projects assert that differences among women (and men) may be more consequential than differences between women and men. All in all, gender theory is founded on a presumption of difference. The strength of gender theory will be its ability to explain occasions when differences arise and when they do not. In the remainder of this section, I reflect on my findings to articulate a new direction for gender theory as it pertains to the transition to adulthood.

How do we understand the lack of inter-dependence between socio-economic and family formation plans that exists for both adolescent girls and boys? I argue that the past thirty years of social, economic, and political changes have created a climate in which women *can* further their education, have a family, and pursue a career. Combining these roles is not only a possibility for women, but it has become a necessity for families because of the poor economic conditions that developed during the 1970s. When society minimizes the role conflicts that women experience and blames these conflicts on

personal troubles rather than social arrangements, adolescent girls begin to believe that they can do it all if they try hard enough (or have a cooperative spouse).

Although adolescent girls may be exposed to and question the sexual division of labor in their family of origin, the cumulative experiences of women indicate that the "second shift" is something to be endured. Given that social arrangements have changed little for men (they are still expected to combine work and family roles and they continue to contribute little time to child care and household labor), the lack of inter-dependence between their socio-economic and family plans is not surprising.

The significant association between marital timing and childbearing plans reflects a common assumption among adolescent girls in the 1980s—childbearing had to occur quickly if one married late because these women would almost be passed their reproductive prime. The social time of childbearing has changed since the early 1980s with young women delaying childbearing later than ever before (Moen 1992). Advances in reproductive technology provide "late starters" with opportunities to bear children well into their 40s and may reduce the difference I find in adolescent girls' and boys' expected timing of family formation among younger cohorts. This elaboration illustrates how gender theory can explain the lack of inter-dependence between socio-economic and family formation plans as well as explain the times when they were significantly related.

Gender theory also needs to explain the differential and inconsistent effects of social context on plans for the future and adult outcomes. How do we make sense of the differential effects? Why are so few consistent? And, how do we make sense of the conflicting evidence? For example, the tests of model equivalence indicated that all but three processes were gendered: educational plans, occupational status plans, and

occupational status attainment. Yet, the significant influence of individual aspects of social context suggests that some aspects made a difference to women's and men's plans and achievements even when the processes as a whole were similar for women and men. When the processes were significantly different for women and men, very few factors had a consistent effect across the outcomes. What does this indicate?

The inconsistencies suggest that the aspects of social context that I examined did not perpetuate gender inequality in a systemic fashion. Inequality was created by particular aspects of social context, but the differential effects were not pervasive. However, the only factor to appear systemic in its influence was parental encouragement to attend college and it had a greater effect on women's outcomes. As I mentioned earlier, its influence suggests that women experience a trade-off between family and socio-economic achievements. This provides a point of departure for gender theory. In an era of "equal opportunity" for women in education and the workplace, why does the domestic realm appear impervious to change? Which factors perpetuate this inequality and which factors will create changes in these gender relations? My work suggests that the parents' support to daughters can make a significant contribution to delaying family formation. What other factors might be related?

It is not enough to say that gender inheres in our social processes, practices, institutions, and ideologies. Theory needs to explain where and how gender matters as well as elaborate its significance. The transition to adulthood is a crucial period in human development. During this time, adolescents plan for the future, their early socio-economic achievements provide a foundation for later socio-economic well-being, and many of them form families in early adulthood. Each of these choices has long-term

consequences. To the extent that theory can inform and specify how these processes are gendered, we will have a better understanding of gender's significance.

Implications for Social Policy and Future Research

Where does this take us? In the remaining pages, I discuss a number of the social policy and future research implications of my work. Specifically, I address policies and programs designed to boost girls' self-esteem, aspects of school context that contribute to gender inequality, and parenting practices that enhance children's outcomes.

Earlier, I mentioned that considerable resources have been allocated to social programs designed to boost adolescent girls' self-esteem. These efforts assume that once girls' self-esteem increases they will reap benefits. Some argue that boosting girls' self-esteem deters teen pregnancy. This association has little support in the social science literature, but continues to be accepted in the popular culture (Zabin 1994).

My work suggests that these "self-esteem enhancing" efforts are founded on ideology rather than empirical evidence. Increases in girls' feelings of self-worth do not directly translate into higher socio-economic achievements or influence family formation. Although these programs are well intended, they reinforce the notion that high self-esteem has a positive influence on girls' achievements. These programs also divert attention away from the practices of social institutions that reproduce gender inequality. This inequality is real: adolescent boys with high self-esteem convert this into socio-economic success. Self-esteem in adolescence does not provide these benefits to adolescent girls. And, adolescent boys with low self-esteem appear to be at a disadvantage.

What do we do about this? If the goal of these programs is to enhance girls' feelings of self-worth regardless of the long-term consequences, then these programs may have a beneficial effect on girls' psychological well-being. The relation between girls' self-esteem and other psychological dispositions warrants further study. However, if the goal of these programs is to create more and better socio-economic opportunities for girls by increasing their self-esteem, then this line of reasoning appears unfounded. How can we improve girls' socio-economic outcomes?

One of my most controversial findings is the beneficial effect of attending a Catholic versus a public school on women's occupational status attainment controlling for sex composition of the school among other factors. Future research needs to identify the mechanisms through which Catholic schools influence this outcome. Are Catholic schools better at socializing young women so that they acquire the attitudes and behaviors that the work place rewards? Why would young men be less likely to receive the same benefits? A qualitative, comparative study of the cultures in Catholic and public schools would be useful to explain the effect.

The positive effect of perceived teacher encouragement to attend college on men's educational attainment should likewise prompt an investigation of the process through which this operates. Gender scholars who study classroom dynamics suggest that teachers pay less attention to girls. Yet, even when adolescent girls perceive that their teachers support attending college, this support does not translate into higher educational attainment as it does for boys. Why not?

I also find that perceived parental encouragement to attend college delayed women's family formation and had a positive effect on both adolescent boys' and girls'

socio-economic achievements. Even though I am measuring perceptions of parental support and not actual support, these perceptions had a consistent effect on women's outcomes. To the extent that social policy can encourage parents to support post-secondary education for daughters, this is a meaningful way to improve women's lives.

Overall, my work suggests that parental interest and involvement in adolescents' lives had a positive effect. I find that parental encouragement to attend college benefited young women and men. Monitoring school progress had a greater positive effect for young women relative to young men in terms of occupational status attainment. Knowing a child's whereabouts at all times also had a positive effect on women's and men's educational attainment. Clearly, parental involvement matters to an adolescent child's later achievements. Social programs that foster greater parental involvement in adolescents' lives would undoubtedly be beneficial.

Although the long-term influence of self-esteem was negligible, if interest in the study of self-esteem persists, then I suggest that future research focus on improving our measures of self-esteem and determining its stability. Are measures of global self-esteem tapping different constructs for women and men? Is adolescent boys' self-esteem more stable than adolescent girls' self-esteem? Does the self-esteem of women and men converge over time? Answering these questions will vastly improve our understanding of gender differences in self-esteem.

Research informed by a developmental perspective would focus on changes in plans for the future over time. What happens to young women's and men's plans for the future after adolescence? Do young women's socio-economic plans change once they

have their first child? Do young men's socio-economic and family formation plans continue to be independent of one another?

Future research examining the association between communities and women's outcomes would help explain why adolescent girls from urban areas had lower educational expectations than girls from rural areas even though their exposure to institutions of higher education may be greater. Why was the gap significantly greater for girls than boys? Why does the type of community have no effect on men's outcomes? What happened during the ten years in between the measurement of plans and adult outcomes such that young women were no longer disadvantaged by the type of community in which they lived? These patterns call for further investigation.

At the bivariate level, I found that adolescent girls were more likely to attend schools with a higher proportion of females and Blacks as well as schools of lower socio-economic status relative to adolescent boys. To the extent that parents choose the schools their daughters and sons attend, then we need to examine parents' decision making processes to understand the exact relations between these factors. Is sex an important determinant of parental investments? Or, are other factors more important such as birth order, intelligence, harmonious relations between parent and child, and the sex composition of the siblings? There is much that we do not know about the gendering of parental investments in children.

We also know very little about the process of becoming a teen father and the gendering of the process of becoming a teen parent because much of the research focuses on adolescent girls exclusively. My descriptive analysis suggests that we need to pursue this line of inquiry further to determine whether becoming a teen mother and teen father

are created by the same process. My work examines the entrance into parenthood by young adulthood. Given that this process is gendered, we have reason to believe that social context has a different effect on the propensity to become a teen mother and father. Future research needs to explain how.

A number of theorists argue that gender is deeply embedded in our social institutions (Acker 1992; Alway 1995; Goffman 1977; Connell 1987). Yet, most gender research overlooks the transition to adulthood as a potentially gendered process. By systematically and consistently comparing the experiences of young women and men, I determined that some aspects of the transition to adulthood are gendered. However, I argue that we need to pay close attention to the social context in which the process develops. Doing so leads me to conclude that gender matters under some circumstances and not others. Thus, we need to qualify assertions that gender ubiquitously organizes social life and identify when and where it becomes important.

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APPENDICES

CONCEPTS, VARIABLE NAMES, AND RECODING INFORMATION

Table A-1. Concepts, Description, and Re-coding of Variables

Concept	Description and Variable Name	Recoding Procedures and Original Variable
Race	Race of respondents [BLACK2]	1 = Black 0 = White [RACE4]
Gender	Sex of respondents [SEXCATEG]	1 = Female 0 = Male [PSEX]
Labor market conditions (1982)	County unemployment rates [CUNEMR82]	[CUNEMR82]
Racial composition of the school (1980)	% Black faculty [SB0094F]	[SB0094F]
	% Black students [SB0094S]	[SB0094S]
Sex composition (1980)	% Female faculty [SB040]	[SB040]
	% Female students [SB041]	[SB041]
School socio-economic status (1980)	Average of the socio-economic status of the students in the school [BBSESR_2]	Aggregate of individual student's socio-economic status averaged and re-distributed to the students in the school. Used 1980 data that included all sophomores and seniors (58,000). Derived from [BBSESRAW].
Student teacher ratio (1980)	Proportion of students to teachers [LOGSTUTR]	Log transformation of the school membership divided by the number of classroom teachers [SB002A/SB039]
School type (1980)	Public, private, or Catholic [CATH] [PRIVATE]	Catholic (1 = Catholic 0 = other) Private (1 = private 0 = Other). Contrast category is public. Recoded from [PHSTYPE].

Concept	Description	Recoding Procedures and Original Variable
Parental involvement in the school (1982)	Average parental involvement in the school [PTSCHP_1]	Aggregate and average of parents' participation in the school. Used 1982 wave of data with 28,000 sophomores. Summed variables [FY58A], [FY58B], [FY58E]. Number of times attended parent teacher conferences, number of times attended PTA meetings, number of times volunteered in school. Responses were never, once in a while, often. Higher number means greater participation.
Significant others' influence in the school (1980)	Teachers' educational expectations for student [TEAEDEXP]	Whether teachers thought the student should attend college. Based on student's perceptions. Recode of [BB050D]. 1 = expected to attend college 0 = other expectations.
	Best friend's educational plans [FREDEXP]	Friend's own educational plans as perceived by the student. Recode of [BB051D]. 1 = expected to attend college 0 = other plans.
Region of the U.S. in which the student lives (1980)	New England/Mid Atlantic, Central, South, Mountain/Pacific [NE_REG] [MOUNTREG] [CENTREG]	3 dummy variables. NE/Mid-Atlantic (1 = NE/Mid-Atlantic 0 = other), Central (1 = Central 0 = other), and Mount/Pacific (1 = Mountain/Pacific 0 = other). Contrast category is South. Recoded from [PHSREG]

Concept	Description	Recoding Procedures and Original Variable
Urbanicity of the area in which the student lives (1980)	Urban, suburban, rural [URBAN] [SUBURB]	2 dummy variables representing Urban (1 = urban 0 = other), Suburban (1 = suburban 0 = other). Contrast category is rural. Recoded from [PHSURBAN]
Academic achievement (1980)	Test score on a composite math, reading, and vocabulary test [PBYTEST]	[PBYTEST]
Family composition (1980)	Single parent family [SINGLEPA]	1 = single parent family 0 = other family structure Recode of [BB036A – BB036K] identifying who resided in the home during 1980
	Number of siblings in the family [NUMBSIB2]	Summation of [BB096A through BB096E]. Subtracted 5 to obtain the actual number of siblings since 1 in each category meant no siblings in that age group and spacing. The highest response category (25) means 5 or more siblings across the various age groups (3 years older, 1-2 years older, same age, 1-2 years younger, 3 years younger). I summed across all variables and included responses from people who may have had a missing value code on one or more of the variables. Their number of siblings represents the total for the variables with information.
	Grandparents present [GRANDP]	1= grandparents lived in the household, 0 = grandparents did not live in the household. Based on [BB036G].

Concept	Description	Recoding Procedures and Original Variable
Family Socio-economic status (1980)	Composite measure created by NORC based on father's education, mother's education, father's occupation, family income, and material possessions [FAMSES80]	Based on [PBYSES]. Changed missing value designation.
Parental educational level (1980)	Mother's education [MOTHRED]	Based on [BB042]. Data from 1982 were used for data missing in 1980.
	Father's education [FATHERED]	Based on [BB039]. Data from 1982 were used for data missing in 1980.
Parental monitoring (1980)	Parental monitoring of school progress [PSCHM80]	Summation of mother's and father's monitoring of school progress. 1 = Yes 0 = No and does not apply Recoded from [BB046A] and [BB046B]
	General monitoring [GENSPR80]	Parents always know where you are and what you are doing 1 = Yes; 0 = No and does not apply Recoded from [BB046C]
Parents' encouragement to attend college (1980)	Parents' educational expectations for child [PEDEXP80]	0 = neither support college 1= 1 parent supports college attendance 2 = both parents support college attendance. All other expectations were coded as 0. Recoded from [BB050A] and [BB050B]

Concept	Description	Recoding Procedures and Original Variable
Self-esteem (1980)	Average of the 6 Rosenberg self-esteem items. Positive dimension items were reverse coded so that a high score means high self-esteem. Missing, no opinion, legit skip, multiple response were coded as missing. Ranged from 1-4 (strongly disagree to strongly agree). [ESTEEM80]	Recode of 1980: [BB058A], [BB058C], [BB058D], [BB058H], [BB058J], [BB058L]
Plans for the future (1982)	Expected occupational status [OCCEXP82]	Recode of [FY77A]. Nam-Powers-Terrie status scores were assigned to each category using 1980 Census classifications. See attached description.
	Expected educational attainment [EDEXP82]	Recode of [FY80]. Nine category, ordinal measure from < HS to professional degree Don't know coded as missing.
	Age expected to have a child [AGXCH82B]	Recode of [FY97B]. Dropped those who already had a child. Those who did not plan to have children were coded with the 30+ group.
	Age expected to marry [AGXMA82B]	Recode of [FY97A]. Dropped those who already married. Those who did not plan to marry were coded with the 30+ group.

Concept	Description	Recoding Procedures and Original Variable
Teen birth	Had a child by 1982 [CHBY82]	Respondents who reported that they lived with their child in 1982 or reported they already had a child when asked the age at which they expected to have a child were coded as experiencing a teen birth (1 = yes 0 = no). Recoded using [FY97B, FD3I, FY52I]
Advanced math course work (1982)	Whether respondent completed advanced math [ADMAT]	Recode of [MATHPATN] so that 1 = completed advanced course work in math 0 = other
Advanced science coursework (1982)	Whether respondent completed advanced science courses [ADSCI]	Recode of [SCIPATN] so that 1 = completed advanced course work in science 0 = other
Educational attainment (1992)	Highest degree earned [EDATT92B]	Collapsed advanced degrees to one category. Recode of [HGHDG92]
Occupational status attainment (1992)	Status of the respondent's occupation. [OCCAT92C]	Recoded occupational attainment to incorporate Nam-Powers-Terrie scores Recode of [Y4303FA]. See attached description.
Union formation (1992)	Whether the person was in a relationship (ever married and cohabiting combined) [UNIONF92]	Recode of [MARST92] 1 = cohabiting/ever married 0 = Never married
Parental Status (1992)	Whether respondent had children [CHILDP]	Recode of [FMFRM92] 1= had child 0 = no child
Residential independence (1992)	Residentially independent by 1992. Living alone, living with spouse, child, or non-relative [RESIDIND]	Recode of [LVARNG92] 1 = independent 0 = dependent

RECODING OCCUPATIONAL CODES TO STATUS SCORES

In 1982, respondents reported the kinds of jobs they expected to have by age 30. Since the occupational variable was nominal, I recoded it according to Nam-Powers-Terrie 1980 occupational status scores. The scores below represent the **average** of the Nam-Powers-Terrie status scores for each Census occupational code if there is more than one code. Those who did not plan to work or expected to be homemakers were given a 0 for their occupational status. The HSB categories were vague so these codes are "rough guides." They are used to give a ranking indication of occupations only.

Table A-2. Expected Occupation and Derived Status Scores, Reported in 1982

Original Classification	Nam-Powers-Terrie Score	Derivation
1 (Clerical)	59.1	Census occupational code 389
2 (Craftsman)	47.06	Occupational codes 444, 505, 529, 575, 579, 585, 637
3 (Farmer)	44.4	Occupational codes 473-476
4 (Homemaker)	0	
5 (Laborer)	17.74	Occupational codes 599, 887, 889, 875, 479
6 (Manager)	81.95	Occupational codes 022, 037
7 (Military)	33.7	Occupational code 905
8 (Operative)	39.49	Occupational codes 686, 803-814, 783, 785
9 (Professional)	75.02	Occupational codes 043, 059, 063, 068, 076,105, 095-097, 106, 163-199
10 (Professional-Doctor)	98.75	Occupational codes 084-089
11 (Proprietor)	66.4	Occupational code 243
12 (Protective Services)	61.92	Occupational codes 413-427

Original Classification	Nam-Powers-Terrie Score	Derivation
13 (Sales)	52.1	Occupational codes 253-285
14 (Teacher)	75.9	Occupational codes 153, 154, 159
15 (Service)	22.42	Occupational codes 403-407; 433-469
16 (Technical)	68.28	Occupational codes 208, 216, 225, 235
17 (Does not plan to work)	0	

In 1992, respondents reported their present occupation according to a more detailed set of categories. This time, I recoded of respondent's occupation using Nam-Powers-Terrie Occupational Status Scores for 1990.

Table A-3. Respondent's Occupation and Derived Status Score, 1992

Original Classification	Nam-Powers-Terrie Score	Derivation
-9 (not working)	7.7	Census occupational code 909 (experienced unemployed)
1 (Clerical-secretarial)	51.3	Occupational code 313
2 (Clerical- financial)	48	Occupational code 337-344
3 (Clerical-other)	47.8	Occupational code 314-336, 345-386, 389
4 (Craftsman)	44.1	Occupational codes 444, 505, 529, 575, 579, 585, 637
5 (Farmer)	44.53	Occupational codes 473-476
6 (Homemaker)	Missing value	
7 (Laborer)	18.1	Occupational codes 599, 887, 889, 875, 479
8 (Manager-sales)	66	Occupational code 243
9 (Manager-government)	81.8	Occupational codes 004, 005
10 (Manager-retail)	66	Occupational code 243
11 (Manager-manufacturing)	65	Occupational code 628
12 (Manager-other)	81.2	Occupational codes 021, 022
13 (Military)	38.6	Occupational code 905

Original Classification	Nam-Powers-Terrie Score	Derivation
14 (Skilled operative)	39.1	Occupational codes 686, 803, 804, 806-814, 783, 785
15 (Professional- arts)	58	Occupational codes 183-199
16 (Professional- medical)	87.26	Occupational codes 085-106
17 (Professional- engineer)	94.7	Occupational codes 044-059
18 (Physician)	99.8	Occupational code 084
19 (Professional- legal)	99	Occupational codes 178, 179
20 (Professional- other)	89.4	Occupational codes 043, 063-083, 164-177
21 (Owner- retail)	66	Occupational code 243
22 (Owner- manfacturing)	66	Occupational code 243
23 (Owner- other)	66	Occupational code 243
24 (Protective Services)	61.9	Occupational codes 413-427
25 (Sales)	50.9	Occupational codes 253-285
26 (Teacher)	80.93	Occupational codes 153, 154, 159
27 (Service)	24.42	Occupational codes 403-407; 433-469
28 (Technical- computer related)	50.25	Occupational codes 308, 309
29 (Technical- non computer)	67.1	Occupational codes 208, 216, 225, 235

SIMULTANEOUS EQUATIONS FOR THE GENDERED DECISION MAKING PROCESS

$$Y_1 = \alpha + \beta_2 Y_2 + \beta_3 Y_3 + \gamma_1 X_1 + \gamma_2 X_2 + \gamma_3 X_3 + \gamma_4 X_4 + \gamma_5 X_5 + \gamma_6 X_6 + \gamma_7 X_7 + \gamma_8 X_8 + \gamma_9 X_9 + \gamma_{10} X_{10} + \gamma_{17} X_{17} + \gamma_{18} X_{18} + \gamma_{19} X_{19} + \gamma_{20} X_{20} + \gamma_{21} X_{21} + \gamma_{22} X_{22} + \gamma_{25} X_{25} + U_1$$

$$Y_2 = \alpha + \beta_1 Y_1 + \gamma_1 X_1 + \gamma_3 X_3 + \gamma_7 X_7 + \gamma_8 X_8 + \gamma_9 X_9 + \gamma_{10} X_{10} + \gamma_{11} X_{11} + \gamma_{12} X_{12} + \gamma_{13} X_{13} + \gamma_{17} X_{17} + \gamma_{21} X_{21} + \gamma_{25} X_{25} + U_2$$

$$Y_3 = \alpha + \beta_1 Y_1 + \beta_2 Y_2 + \beta_4 Y_4 + \gamma_1 X_1 + \gamma_9 X_9 + \gamma_{10} X_{10} + \gamma_{11} X_{11} + \gamma_{12} X_{12} + \gamma_{13} X_{13} + \gamma_{14} X_{14} + \gamma_{15} X_{15} + \gamma_{16} X_{16} + \gamma_{17} X_{17} + \gamma_{21} X_{21} + \gamma_{25} X_{25} + \gamma_{26} X_{26} + U_3$$

$$Y_4 = \alpha + \beta_3 Y_3 + \gamma_1 X_1 + \gamma_9 X_9 + \gamma_{10} X_{10} + \gamma_{11} X_{11} + \gamma_{12} X_{12} + \gamma_{13} X_{13} + \gamma_{14} X_{14} + \gamma_{15} X_{15} + \gamma_{17} X_{17} + \gamma_{21} X_{21} + \gamma_{23} X_{23} + \gamma_{24} X_{24} + \gamma_{25} X_{25} + U_4$$

Y_1 = educational expectations, Y_2 = occupational status expectations, Y_3 = age at which first child is expected, Y_4 = age at which first marriage is expected, X_1 = race, X_2 = county unemployment, X_3 = average school socio-economic status, X_4 = average parental participation in school, X_5 = teachers' encouragement to attend college, X_6 = friend's educational plans, X_7 = Catholic school, X_8 = private school, X_9 = urban, X_{10} = suburban, X_{11} = New England/Mid-Atlantic region, X_{12} = Central region, X_{13} = Mountain/Pacific region, X_{14} = % Black students, X_{15} = % female students, X_{16} = log students/teacher, X_{17} = family socio-economic status, X_{18} = mother's educational level, X_{19} = father's educational level, X_{20} = parents' encouragement to attend college, X_{21} = academic achievement, X_{22} = parental school monitoring, X_{23} = single parent family, X_{24} = number of siblings, X_{25} = discipline problems in school, X_{26} = general supervision, U = error term.

Table A-4. Reduced Form OLS Regression of Educational Expectations on Social Context and Other Factors by Sex

Variables	Females	Males
Race (1 = Black)	1.36***	.699***
	(.212)	(.209)
Academic achievement	.024***	.030***
	(.002)	(.002)
Discipline problems in school (1 = yes)	-.567***	-.157
	(.150)	(.113)
Labor Market Conditions		
County unemployment, 1982	.015	.019
	(.012)	(.013)
School Context		
% Black students	.002	.007
	(.004)	(.004)
% female students	.002	.003
	(.004)	(.003)
Avg. SES	.245	.350*
	(.155)	(.176)
Avg. parental participation	-.030	.028
	(.103)	(.112)
Log students/teacher	-.129	-.061
	(.100)	(.113)
Teacher's encouragement to attend college	.207*	.151
(1 = yes)	(.092)	(.097)
Best friend plans to attend college	.650***	.716***
(1 = yes)	(.110)	(.108)
Catholic	.293	.261
	(.159)	(.155)
Private	.045	-.231
	(.242)	(.274)
Urban	-.064	-.020
	(.141)	(.154)
Suburban	.111	.241*
	(.098)	(.110)
New England/Mid-Atlantic	.200	.045
	(.126)	(.130)
Central	.160	-.001
	(.118)	(.121)
Mountain/Pacific	-.050	.040
	(.147)	(.159)
Family Context		
Single parent family	.507***	.097
(1 = single parent)	(.136)	(.153)
Number of siblings	-.039*	-.018
	(.020)	(.022)
Family SES	.009**	.004
	(.003)	(.003)
Mother's education	.078***	.069**
	(.024)	(.026)
Father's education	.061*	.082***
	(.024)	(.025)
Parents' encouragement to attend college	.591***	.714***
	(.062)	(.067)
General supervision (1 = yes)	.178	.232*
	(.130)	(.112)
Parental school monitoring	.116	-.024
	(.072)	(.074)
Constant	1.44**	.958*
	(.470)	(.474)
R^2	.46	.54
F	78.27	103.00
	(26, 2588)	(26, 2181)
	p < .001	p < .001
N	2615	2208

* p < .05 ** p < .01 *** p < .001 Note: Standard errors are robust estimates calculated using a Taylor series linearization approximation.

The Chow test of model equivalence (F (27, 4769) = 0.850, p > .25). Goldfeld Quandt test (F (2588, 2181) = 1.04, p < .001).

Table A-5. Reduced Form OLS Regression of Occupational Expectations on Social Context and Other Factors by Sex

Variable	Females	Males
Race (1 = Black)	13.00***	7.02**
	(2.43)	(2.23)
Academic achievement	.217***	.187***
	(.023)	(.019)
Discipline problems in school	-2.77	-2.73*
(1 = yes)	(1.79)	(1.20)
Labor Market Conditions		
County unemployment, 1982	.221	.306*
	(.140)	(.124)
School Context		
% Black students	.001	.064
	(.046)	(.038)
% female students	.015	.011
	(.051)	(.037)
Avg. SES	2.42	2.03
	(2.13)	(1.73)
Avg. parental participation	.481	1.53
	(1.36)	(1.27)
Log students/teacher	.143	2.35
	(1.53)	(1.36)
Teachers' encouragement to attend college	-.697	-.455
(1 = yes)	(1.19)	(1.06)
Best friend plans to attend college	5.14***	5.67***
(1 = yes)	(1.32)	(1.06)
Catholic	.046	-2.02
	(2.27)	(1.71)
Private	1.62	-4.04
	(3.21)	(3.25)
Urban	5.90***	1.91
	(1.84)	(1.56)
Suburban	2.73*	2.57*
	(1.31)	(1.12)
New England/Mid-Atlantic	2.37	.828
	(1.51)	(1.31)
Central	1.39	.394
	(1.49)	(1.28)
Mountain/Pacific	-1.69	-1.20
	(1.96)	(1.69)
Family Context		
Single parent family	3.65*	-.229
(1 = single parent)	(1.58)	(1.53)
Number of siblings	-.860**	-.048
	(.280)	(.205)
Family SES	.056	.018
	(.036)	(.029)
Mother's education	.264	.143
	(.301)	(.242)
Father's education	.072	.729**
	(.297)	(.242)
Parents' encouragement to attend college	4.28***	3.94***
	(.744)	(.625)
General supervision (1 = yes)	1.56	.193
	(1.74)	(1.17)
Parental school monitoring	.347	.958
	(.921)	(.779)
Constant	29.74***	25.96***
	(6.53)	(5.62)
R^2	.21	.29
F	17.28	25.61
	(26, 2720)	(26, 2284)
	p < .001	p < .001
N	2747	2311

*p < .05 **p < .01 ***p< .001 Note: Standard errors are robust estimates calculated using a Taylor series linearization approximation.

The Chow test of model equivalence (F (27, 5004) = 1.27, p < .10). Goldfeld Quandt test (F (2720, 2284) = 1.62, p < .001).

Table A-6. Reduced form OLS Regression of Expected Age at First Marriage on Social Context and Other Factors by Sex

Variable	Females	Males
Race (1 = Black)	2.11***	1.93***
	(.423)	(.440)
Academic achievement	.015***	.005
	(.003)	(.004)
Discipline problems in school	.081	.282
(1 = yes)	(.245)	(.228)
Labor Market Conditions		
County unemployment, 1982	.049*	.035
	(.019)	(.023)
School Context		
% Black students	.011	.002
	(.007)	(.007)
% female students	.004	.001
	(.008)	(.006)
Avg. SES	1.04***	1.06***
	(.266)	(.328)
Avg. parental participation	.011	-.176
	(.175)	(.203)
Log students/teacher	.111	.250
	(.163)	(.238)
Teachers' encouragement to attend college	.336*	-.008
(1 = yes)	(.155)	(.176)
Best friend plans to attend college	.318	-.118
(1 = yes)	(.182)	(.192)
Catholic	.290	-.275
	(.271)	(.287)
Private	.310	-.296
	(.485)	(.641)
Urban	.282	-.038
	(.255)	(.278)
Suburban	.156	.133
	(.168)	(.204)
New England/Mid-Atlantic	1.03***	.369
	(.205)	(.257)
Central	.193	-.038
	(.201)	(.247)
Mountain/Pacific	.299	-.081
	(.250)	(.299)
Family Context		
Single parent family	.227	.349
(1 = single parent)	(.220)	(.268)
Number of siblings	.059	-.033
	(.033)	(.037)
Family SES	-.003	.009
	(.005)	(.005)
Mother's education	.105*	.045
	(.043)	(.046)
Father's education	.054	.044
	(.039)	(.042)
Parents' encouragement to attend college	.361***	.164
	(.101)	(.110)
General supervision (1 = yes)	-.172	-.387
	(.236)	(.203)
Parental school monitoring	-.175	.220
	(.127)	(.146)
Constant	5.14***	7.60***
	(.799)	(.947)
R^2	.16	.09
F	15.42	5.65
	(26, 2417)	(26, 2062)
	p < .001	p < .001
N	2444	2089

*p < .05 **p < .01 ***p< .001 Note: Standard errors are robust estimates calculated using a Taylor series linearization approximation.

The Chow test of model equivalence (F (27, 4479) = 9.56, p < .01). Goldfeld Quandt test (F (2417, 2062) = 0.943, p > .50).

Table A-7. Reduced Form OLS Regression of Expected Age at First Birth on Social Context and Other Factors by Sex

Variable	Females	Males
Race (1 = Black)	.820	.476
	(.437)	(.432)
Academic achievement	.021***	.010**
	(.003)	(.003)
Discipline problems in school	.006	-.152
(1 = yes)	(.247)	(.221)
Labor Market Conditions		
County unemployment, 1982	.037	.021
	(.020)	(.022)
School Context		
% Black students	.006	.001
	(.007)	(.007)
% female students	.003	.001
	(.008)	(.006)
Avg. SES	1.06***	1.22***
	(.273)	(.312)
Avg. parental participation	-.033	-.270
	(.182)	(.215)
Log students/teacher	-.084	.344
	(.181)	(.238)
Teachers' encouragement to attend college	.195	.085
(1 = yes)	(.153)	(.172)
Best friend plans to attend college	.469*	-.230
(1 = yes)	(.185)	(.182)
Catholic	.137	-.380
	(.278)	(.299)
Private	-.133	-.903
	(.417)	(.653)
Urban	.209	-.344
	(.259)	(.281)
Suburban	.256	-.117
	(.170)	(.202)
New England/Mid-Atlantic	.775***	-.023
	(.207)	(.242)
Central	-.208	-.293
	(.198)	(.228)
Mountain/Pacific	-.090	-.323
	(.260)	(.290)
Family Context		
Single parent family	.193	.099
(1 = single parent)	(.226)	(.264)
Number of siblings	.029	-.036
	(.034)	(.038)
Family SES	-.004	.008
	(.005)	(.005)
Mother's education	.110*	.044
	(.043)	(.043)
Father's education	.052	.068
	(.040)	(.042)
Parents' encouragement to attend college	.395***	.012
	(.101)	(.111)
General supervision (1 = yes)	.059	-.289
	(.246)	(.196)
Parental school monitoring	-.070	.231
	(.129)	(.145)
Constant	7.71***	9.77***
	(.850)	(.986)
R^2	.16	.09
F	14.89	5.29
	(26, 2422)	(26, 2008)
	p < .001	p < .001
N	2449	2035

*p < .05 **p < .01 ***p< .001 Note: Standard errors are robust estimates calculated using a Taylor series linearization approximation.

The Chow test of model equivalence (F (27, 4430) = 6.16, p < .001). Goldfeld Quandt test (F (2422, 2008) = 1.03, p < .001).

DEFINING MATH AND SCIENCE COURSE WORK PATTERNS

The National Opinion Research Center (NORC) recoded student reports of course completion and categorized students' math and science course work into four groups. Both refer to the number of credits completed in these areas; however, the coding of the math courses is ambiguous at the upper extreme. I used the variables MATHPATN and SCIPATN to construct the advanced math and science variables. These are taken directly from the electronic code book provided by NORC.

The categories for math course work pattern are: 1 = earned less than one credit in mathematics, 2 = earned 1-2 credits in mathematics with less than 2 in the college preparatory courses, 3 = earned for or more credits in mathematics, one of which is either algebra 1, 2, or 3, geometry, plane or solid geometry, trigonometry, or mathematics 1 or 2, 4 = earned four or more credits in mathematics, at least one of which is in an advanced course.

The categories for science course work pattern are: 1 = earned less than one credit in science, 2 = earned one or more credits in general life or physical science courses and less than one credit in advanced life science offerings, 3 = earned one or more credits in an advanced physical or life science course in addition to any credits earned in general life or physical science, 4 = earned one or more credits in each of the following: biology, chemistry, and physics in addition to any credits earned in general science courses.

Figure A-1. Predicted Probability of Dropping Out of High School by Sex and Self-Esteem

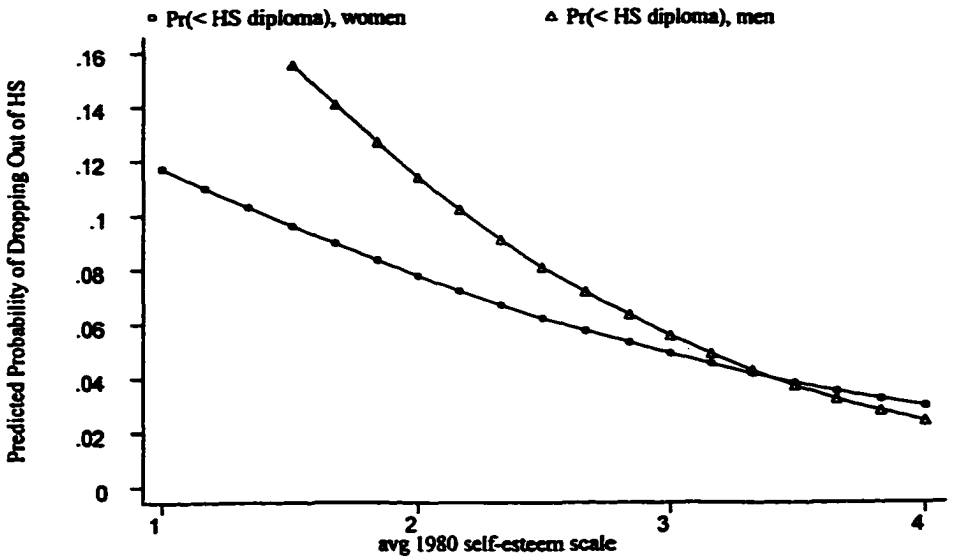


Figure A-2. Predicted Probability of Obtaining a High School Diploma by Sex and Self-Esteem

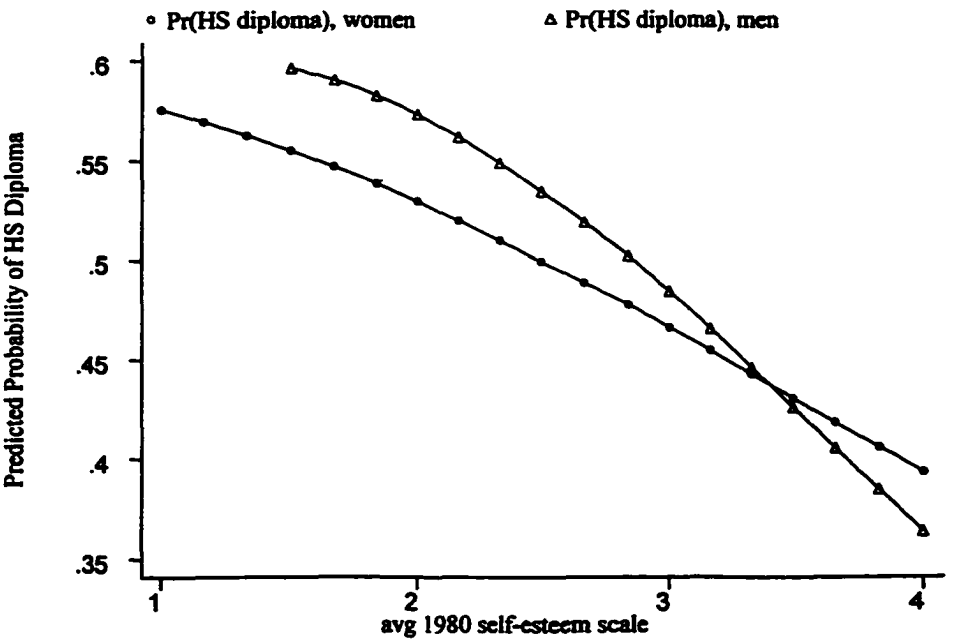


Figure A-3. Predicted Probability of Obtaining a Certificate by Sex and Self-Esteem

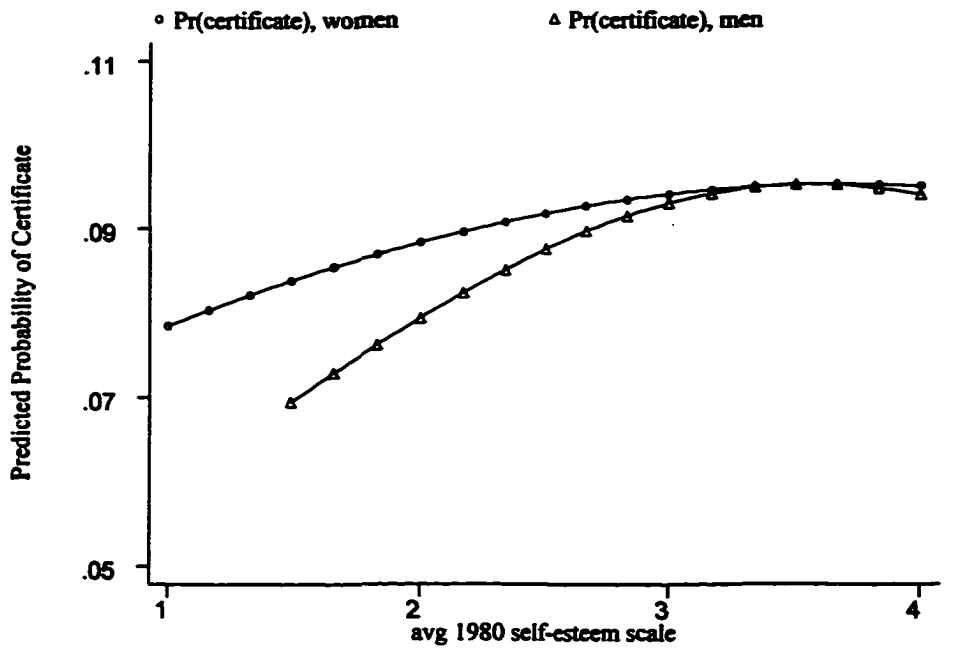


Figure A-4. Predicted Probability of Obtaining an Associate's Degree by Sex and Self-Esteem

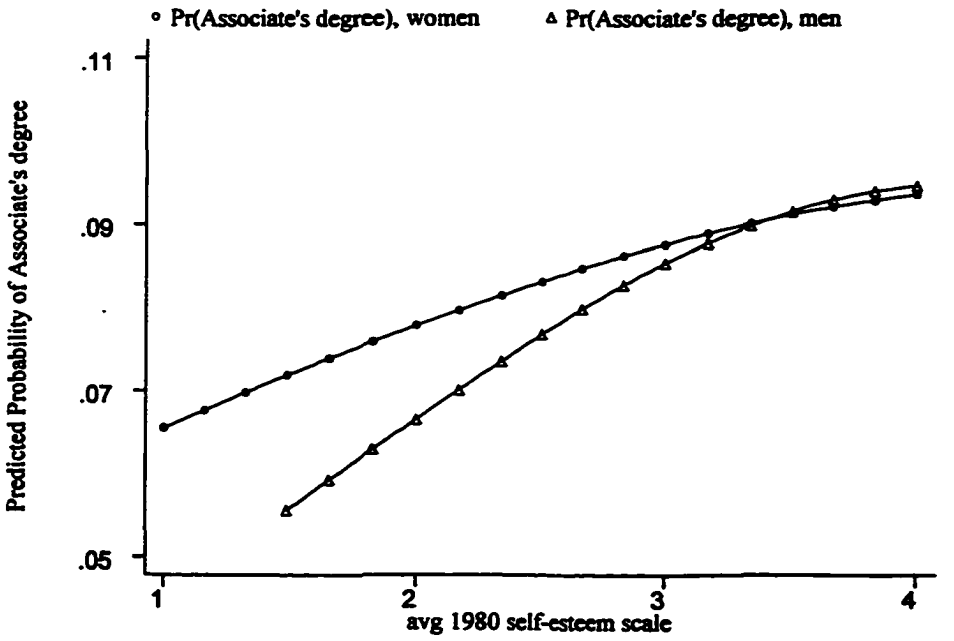


Figure A-5. Predicted Probability of Obtaining an Advanced Degree by Sex and Self-Esteem

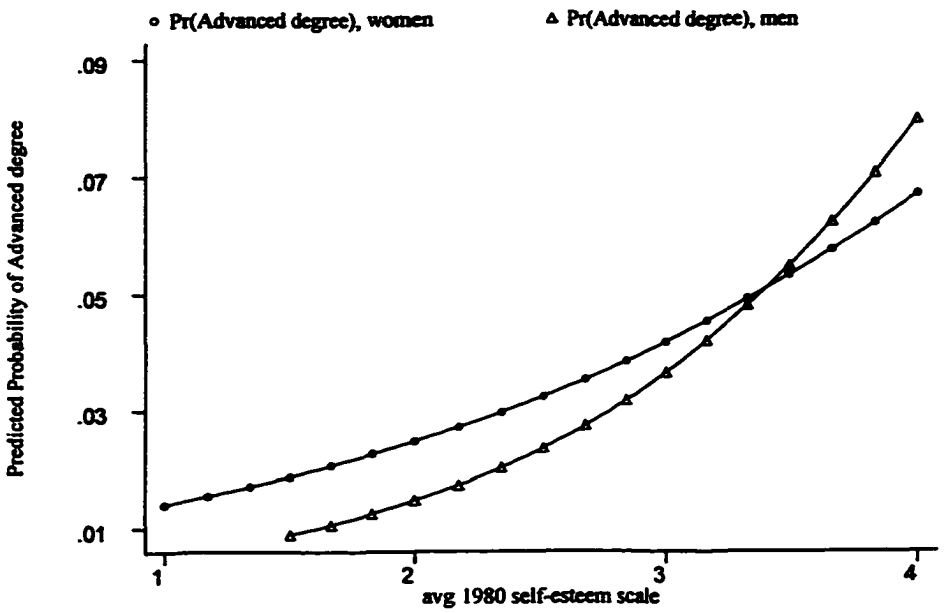


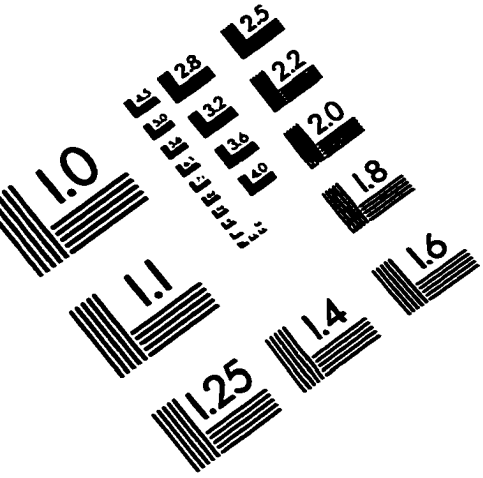
Table A-8. Gender Differences in Outcomes Resulting from Gender Differences in Treatment

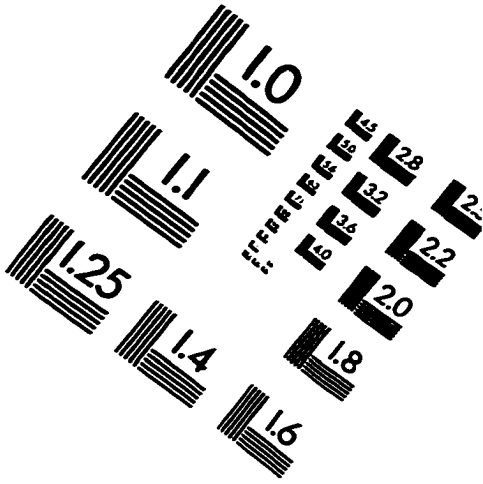
	Model 1 Union Formation	Model 2 Parental Status	Model 3 Residential Independence
Proportion of women achieving these outcomes (without controls).	.70	.56	.86
Proportion of men achieving these outcomes (without controls).	.55	.41	.79
Original gap between women's and men's outcomes.	.15	.15	.07
Substituting women's means in men's equations.			
Proportion of women achieving these outcomes under men's conditions.	.57	.38	.80
Measure of discrimination[1] = (PW – AW)/AM	-.24	-.44	-.08
Percent change	-24%	-44%	-8%
Substituting men's means in women's equations.			
Proportion of men achieving these outcomes under women's conditions.	.74	.56	.89
Measure of discrimination[1] = (PM – AM)/AW	.15	.27	.12
Percent change	15%	27%	12%

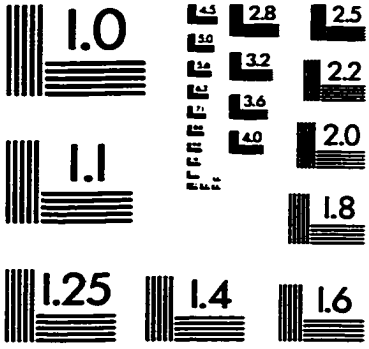
All means were weighted. Equations included variables for school context, labor market conditions, and family context. Measures of race, region, urbanicity, academic achievement, and discipline problems were not included.

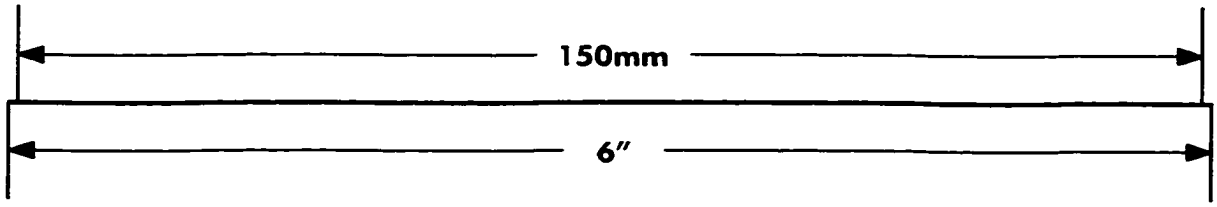
[1]The Oaxaca measure of discrimination uses the formula: (predicted outcome for group 1 – actual outcome for group 1) divided by the actual outcome for group 2. In the case of my work, PM = predicted outcome for men, PW = predicted outcome for women, AM = actual outcome for men, and AW = actual outcome for women (Raymond, Sesnowitz, and Williams 1988).

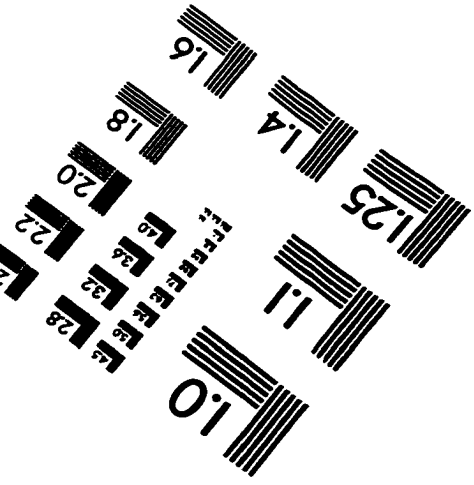
IMAGE EVALUATION
TEST TARGET (QA-3)











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